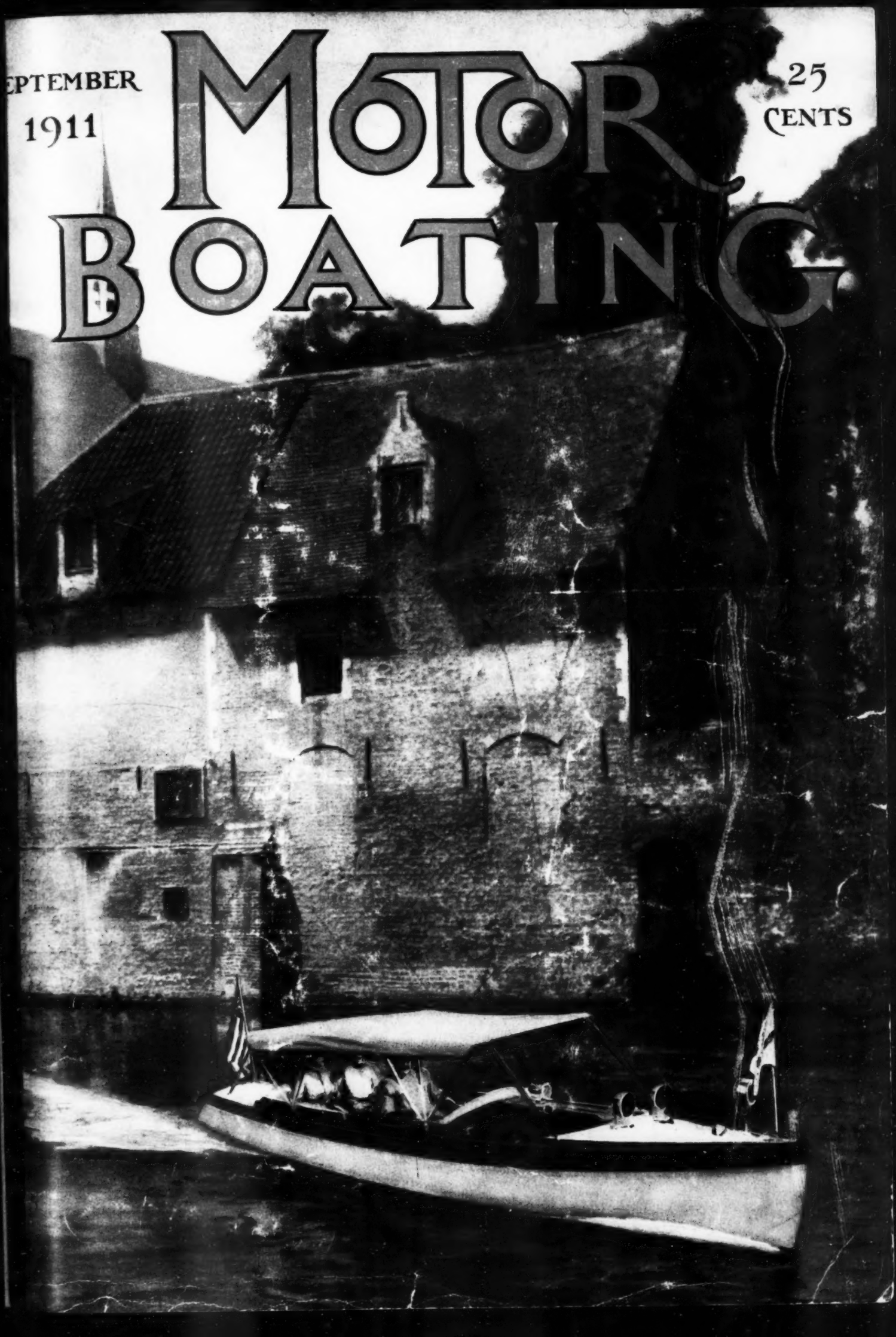
EPTEMBER
1911

MOTOR BOATING

25 CENTS



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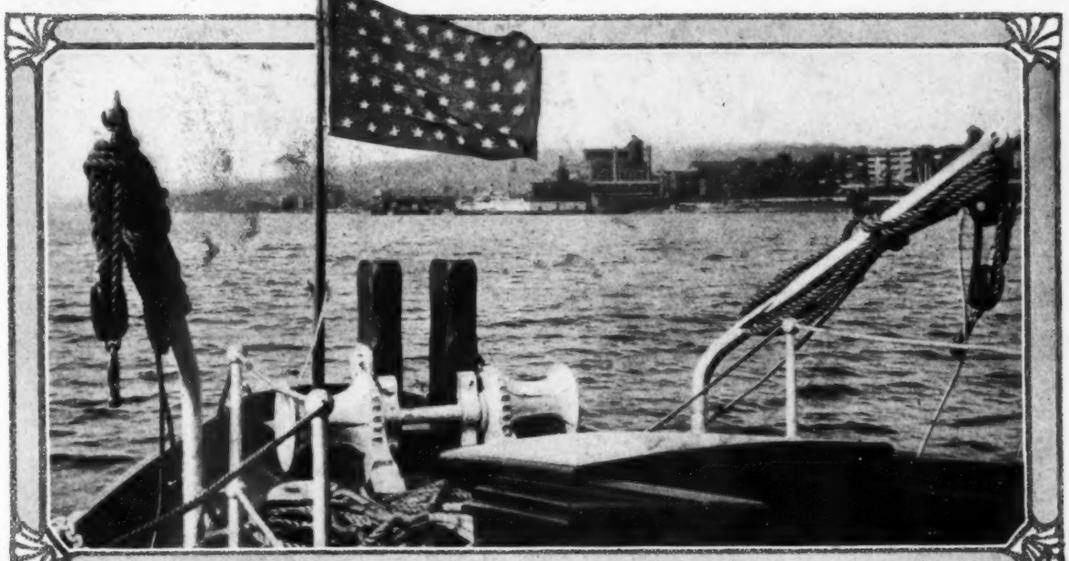

SEPTEMBER, 1911

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Motor boats of the Thousand Islands watching the struggle for the Gold Cup at Frontenac.
The racers, with their white spray wings extended, may be seen in the distance.

Photograph by Levick.

MOTOR BOATING

THE NATIONAL MAGAZINE OF MOTOR BOATING

How Mitt II Won the Gold Cup.

Results of the Three Days of Racing on the St. Lawrence, in Which Dixie Was Disabled. Another Case of Luck and Reliability Winning Against Much Superior Speed.

By C. L. Grant.

FRONTENAC, Thousand Islands.—Ideal weather conditions, a course that left little to be desired from the spectators' standpoint and a general curiosity on the part of everyone to ascertain first hand as to the speed capabilities of Dixie IV, created an atmosphere of interest in this year's Gold Challenge Cup races, run over the Frontenac course on Tuesday, Wednesday and Thursday, Aug. 8, 9 and 10, unequaled since the famous Gold Cup came to the Thousand Islands a number of years ago. In a way the races were disappointing. So far as the weather man was concerned, he did his best for the three straight days, but Dixie IV, in the way of speed stood far and above the other boats entered, occupying a class by herself, and leaving the result, barring accidents, a foregone conclusion a minute after the starting gun had boomed over the waters.

But the accidents happened. The intricate mechanism of the fifty thousand dollar racer went wrong during the first day's race, causing the melting out of a bearing and the absence of Dixie on the two following days, when she was being stripped, a helpless cripple at the boat house of Commodore Walter Jerome Green at Watch Island. This proved a big disappointment to the crowds that came from far and near to witness the contests and especially to get a glimpse at the boat which was heralded as the probable representative of this country against Great Britain's speediest in the coming races for the Harmsworth Cup.

The opening day found the skies overcast during the morning and a rather stiff down river wind ruffling the St. Lawrence weather not especially favorable for hydroplanes. In the early afternoon the skies brightened and the wind died down a bit, although a shower an hour before the race sent the hundreds along the river banks scampering for shelter, while aboard the yachts lining the course, sailors were set to work in making things more snug for parties aboard. When the race was called, however, everything was pleasant.

Dixie IV was at her boathouse 16 minutes before the gun sounded, with men working over her mechanism. It looked for a time as though the boat would not be a starter. Even when the gun sounded, Dixie was a mile below the starting

Results of the Gold Cup Races.

First Day.

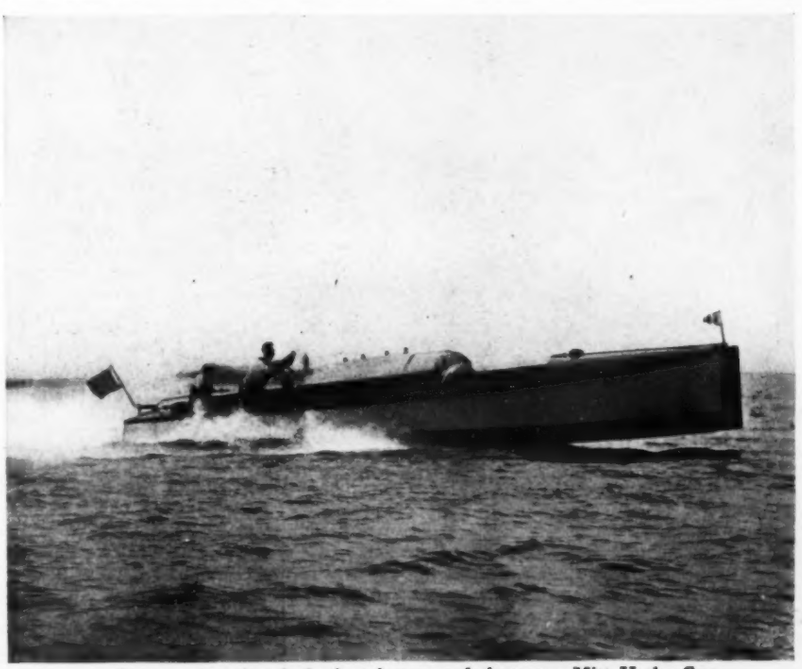
BOAT.	OWNER.	CLUB.	ELAPSED TIME.
Dixie IV	F. K. Burnham	Frontenac Y. C.	51:45
Skipper	H. B. Quarrier	Chippewa Y. C.	1:00:51
Mitt II	J. H. Hayden	1,000 Island Y. C.	1:03:39
Hornet	Mrs. C. L. Tousey	Syracuse Y. C.	Withdrawn 1st lap
Wasp	W. Tousey	1,000 Island Park Y. C.	Withdrew

Second Day.

Mitt II	J. H. Hayden	1,000 Island Y. C.	53:31
Wasp	W. Tousey	1,000 Island Park Y. C.	56:03
Skipper	H. B. Quarrier	Chippewa Y. C.	Withdrew

Third Day.

Wasp	W. Tousey	1,000 Island Park Y. C.	53:17
Mitt II	J. H. Hayden	1,000 Islands Y. C.	54:50
Skipper	H. B. Quarrier	Chippewa Y. C.	56:05



It was more her luck than her speed that gave Mitt II the Cup.

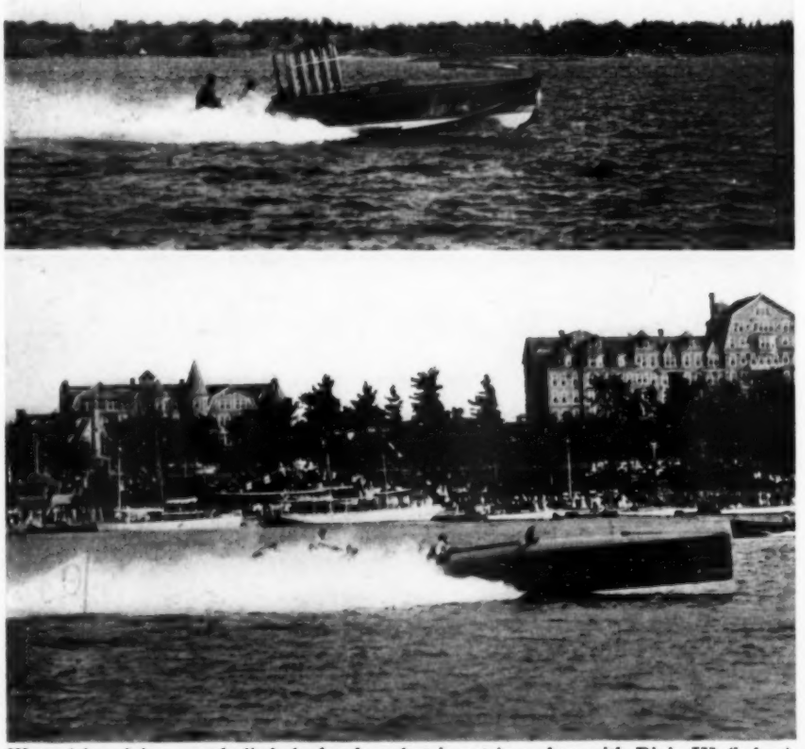
The busy dock extending from the grounds of the Frontenac Yacht Club.

point, with Burnham at the wheel. It took her but a short time, however, to get into the game, in a way that showed how futile would be the efforts in speed of the other boats, Wasp, Hornet, Skipper, and Mitt II. Viva not having put in an appearance.

Dixie, with the clouds of spray hiding her general form, tore along over the 28 mile course, passing one and then another, yet going at nowhere near her full speed, the twin screws turning but 850 revolutions instead of the 1,100, their normal speed. So slow was Dixie's time that the 28 miles were covered in 51 min. 45 sec., a speed which called forth a protest from certain ones, in that it was not representative of the boat's capabilities and that the public, in reading the press reports would form a wrong impression of the boat's speed.

The first race was Dixie's last at the Thousand Islands. Sometime during the race an oil lead forward had run dry and during the 28 miles a bearing had run without oil, melting out the babbitt and putting the boat out of the contest. It was not until the morning of the second day that the serious condition of affairs was known. It became rumored in the early afternoon that Dixie was out of the running. The faces of leading members of the Frontenac Yacht Club, defenders of the trophy, told of the disappointment, for it had been the hope that the cup might remain another year at their palatial quarters.

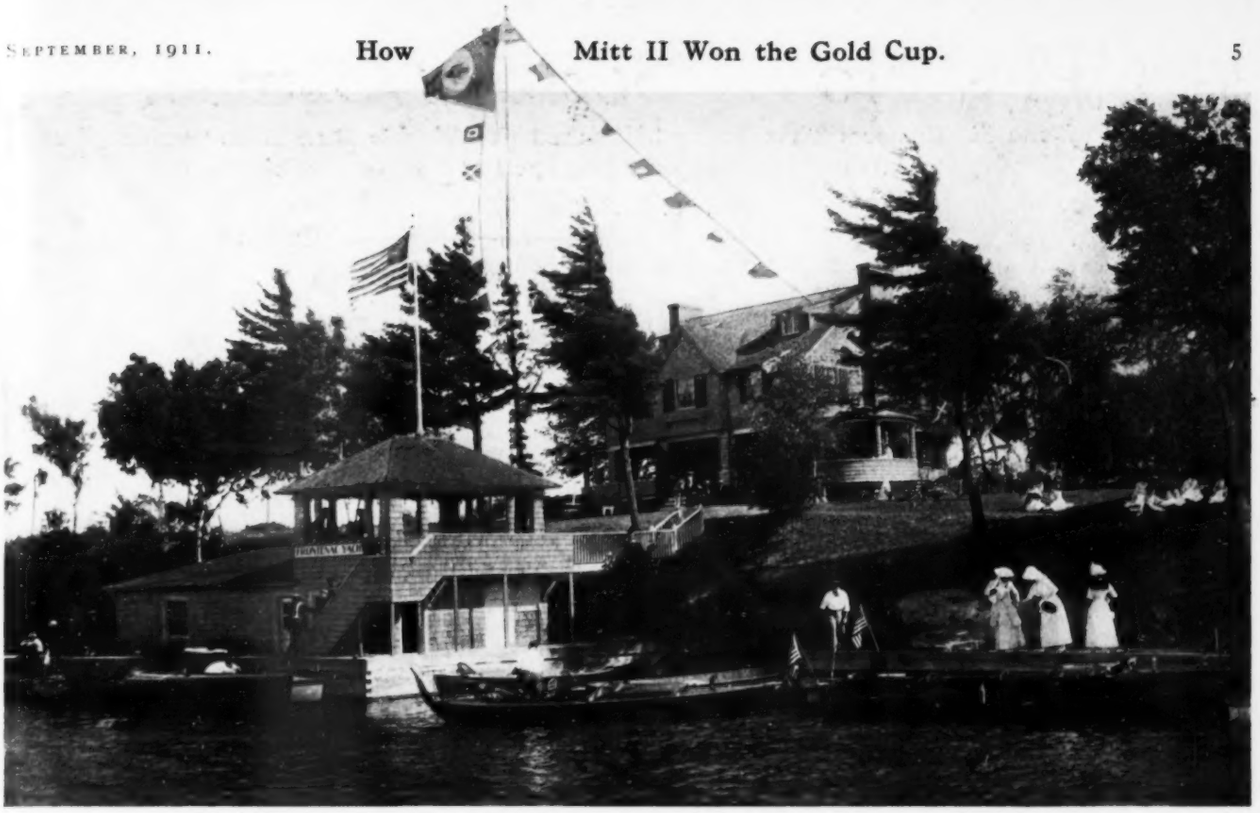
There is the keenest rivalry between the Frontenac club and the Thousand Islands Yacht club, who, through the speed of its representative, Mitt II, now holds possession of the cup, and it is safe to presume that no money or efforts will be spared next year in getting the fastest thing afloat to hold the cup at Alexandria Bay, the home of the Thousand Islands Yacht club.



Wasp (above) is a speedy little hydroplane, but is not in a class with Dixie IV (below) whose misfortune lost her the cup.

With Dixie out of the race on the second day, the crowd naturally looked to Skipper, representing the Chippewa Bay Yacht Club, to carry off the honors, but in this race, the uncertainty of intricate mechanism was again demonstrated, the boat breaking a portion of her oiling system, and withdrawing after covering but a part of the course, giving the race to the Mitt II in 53 min. 31 sec. Skipper got busy, made the necessary repairs and like the Wasp, on the day previous, chugged over the course along late in the afternoon, and so maintained its place in the contest.

The third day's



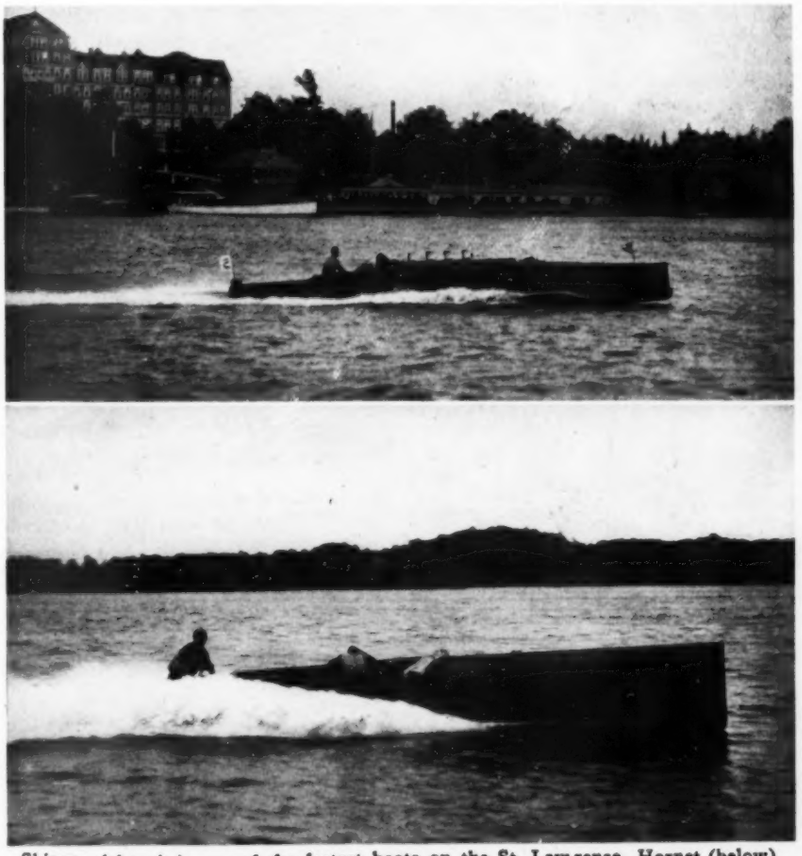
The home of the Frontenac Yacht Club was the center of activity during the Gold Cup Races.

race brought out but three starters, Mitt II, Wasp and Skipper, the event being taken by Wasp, in 53.17, with Mitt II in second place and the Skipper third. On account of time lost at one point of the course through an oversight in not properly turning the flag, Skipper had to go back and make the turn a second time and in that way lost second place to Mitt II.

Thus it was that Mitt II, a boat which at the conclusion of the first day's race seemed to have but the slimmest of a show, won out on points and lugged off the cup to the home of the Thousand Islands Yacht Club.

Motor boat enthusiasts from various sections of the country, spectators at the races, found only the highest of praise for the course and for the welcome by members of the Frontenac Yacht Club. The affair became the gala week of the season at the Islands, attracting a brilliant assemblage each day. On Wednesday night the annual ball of the Frontenac Yacht Club was held. For the occasion the extensive grounds about the hotel were decorated with Japanese lanterns, while the ball room overhead wore a canopy of the flags of all nations, a huge flag of the Frontenac Yacht Club forming the back ground at the far end of the room. As to the course, it was of four laps, so arranged that every inch of it was easily seen by the spectators whether aboard yachts or along the shore.

The Gold Challenge Cup of the American Power Boat Association was first competed for in the summer of 1904, and was won by Standard, representing the Columbia Yacht Club of New York City. Consequently the races were held on the Hudson River as long as the cup was retained by that club, which, however, was for a very brief period. For, later in the same season Vingt-et-Un, racing for the Chippewa Yacht Club, carried the cup to the St. Lawrence. With this club it remained for three years, being successfully defended by Chip I and Chip II. In 1908 the old rating rules by which the previous races had been run, usually with much dissatisfaction, were abandoned, and the race was made a free-for-all event, except that all contesting boats must be under forty feet in length. Dixie II then took the Cup to the Thousand Islands Yacht Club at Alexandria Bay, and successfully defended it the following year. Last year she again won the cup, though this time for the Frontenac Yacht Club, which club she represented.



Skipper (above) is one of the fastest boats on the St. Lawrence. Hornet (below) withdrew without showing her caliber.

The Novel Scripps Cruise.

How Four of the Six Cruisers That Started Finished the Week's Run With Perfect Scores. A Novelty in Marine Motoring Based on the Popular Automobile Tours.

By C. B. McCuaig.

IT was late in the afternoon of Tuesday, Aug. 15th when L. E. R., Jr., chugged up to the Buffalo Launch Club landing, first of all the Scripps cruisers to check in, and a full hour ahead of the rest of the pack. This was due in a measure to the fact that Dr. Russell had gotten a good start in the morning, and had not been held back by a threatened storm which delayed the other boats.

Contestants in the Scripps Cruise.

Name.	Owner.		Engine.
L. E. R. Jr.	Dr. L. E. Russell, Springfield, O.	90	H. P. Buffalo
Kathleen	T. R. Donavan, Detroit	40	H. P. Buffalo
Sea Wolf	H. F. Prescott, Detroit	75	H. P. Scripps
Janet	Dr. R. N. Muir, Detroit	15	H. P. Buffalo
Inamic	F. W. Sinks, Detroit	15	H. P. Buffalo
Narmada	Wm. E. Scripps, Detroit	300	H. P. Standard

Inamic was next to make port but the other cruisers followed closely on her heels, and there was only a few moments difference in their landing time. Sea Wolf was the only one that ran any risk of dropping her laurels on the last leg of the cruise, for she came within an even five minutes of finishing outside her time limit which would have put her out of the contest as far as the award of honors was concerned. This belated arrival was through no fault of the boat or her equipment which ran perfectly all through the long voyage, but was caused by the appearance of unusually threatening storm clouds as the Sea Wolf was passing Dunkirk. So black did it look that her skipper feared for more than half an hour that he would be forced to make port, and it was this delay before the clouds finally parted and the sun shone forth for one of the most glorious afternoons of the summer, that almost cost Sea Wolf her perfect score.

When the observers had compared notes and it was announced that four of the five boats left in the contest—L. E. R., Jr., Sea Wolf, Inamic and Janet—had finished with perfect scores the crowd at the Launch Club was simply amazed. They of course knew that four perfect scores had been recorded at Erie the night before, but it was fully expected that the bad weather encountered on the last day's run would break the tie. Moreover it was known that on the night before there had been a general shifting of observers which was expected to play havoc with unblemished records.

But despite it all, when the four cruisers checked in their observers had to confess that no fault could be found with any of them. Their engines had run without a skip for eight solid days without even having a screw adjusted or a bolt made tight. The engineers had only to see that the motors received their fill of oil and gasolene and they did the rest without a miss all through the long run. There was not a fault to be found anywhere.

Now it was for the sole object of proving this efficiency that the Scripps Reliability Cruise was arranged. Commodore William E. Scripps of the Detroit Motor Boat Club and donor of the $2,500 Scripps trophy knew from long experience the capabilities of the motor boat and the gasolene engine. It wearied him, as it does thousands of other motor boat owners, to hear the utility of the motor boat spoken of in a limited sense, as if it were a fair weather toy, and so he conceived the idea of an endurance run that would demonstrate just what the capabilities of the cruising motor boat really are, and how the cruiser can stand the strain of long runs, day after day in all kinds of weather.

Commodore Scripps did not fix the rules for the contest arbitrarily, neither did the Great Lakes Power Boat League, under whose direction it was run. Before the terms of the contest were any more than a nebulous idea, the matter was referred to a committee composed of some of the foremost power boat men in the country, and they gave their best effort to drawing up a set of rules and arranging a run that would thoroughly test the reliability of the boats entering and carry out the Scripps idea.

The result of their deliberation was a cruise for motor boats to be conducted on lines similar to the Glidden Tour for automobiles, all-day runs, checking into night controls, each boat starting with a clean score of 1,000 points and deductions to be made for every repair no matter how trifling.

More than a dozen boats were entered or practically promised, but bright and early on the morning of Monday, Aug. 7th, when the start was made from Detroit, there were only six boats on hand.

It was shortly after 7 o'clock when the six cruisers left the starting line off the

Inamic, one of the perfect score boats, and the dock of the Buffalo Launch Club after the arrival of the Scripps cruisers.

Detroit Motor Boat Club, Windmill Point, Lake St. Clair, and started up stream for the Rushmere Club on St. Clair Flats, which was the first night control

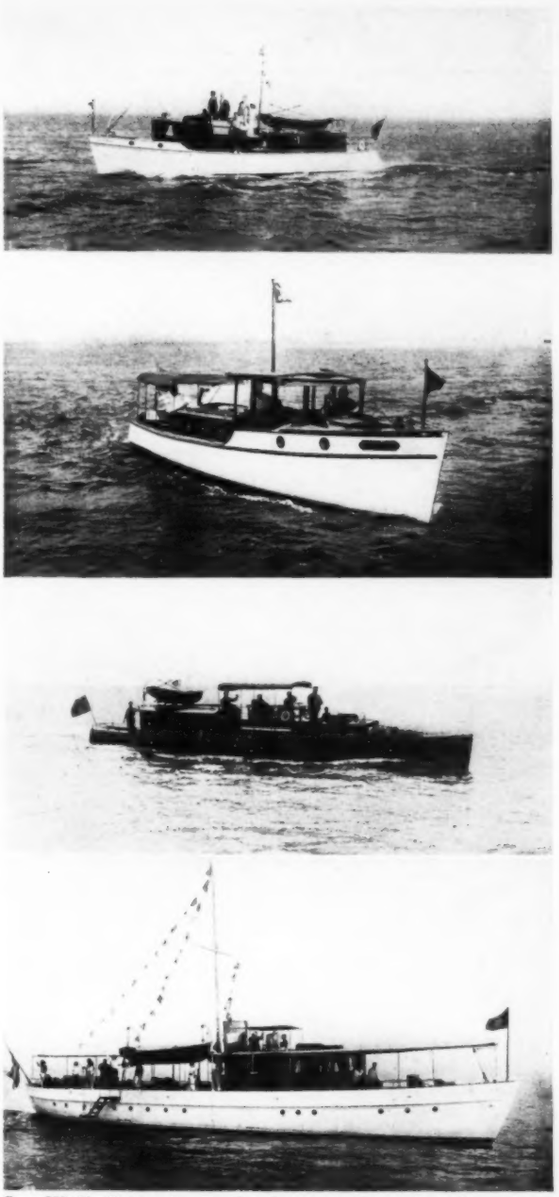
Narmada, Commodore Scripps' cruiser which was used as judges boat was the only one penalized on the first day's run. She had some trouble with her sparking circuit and lost 17 points. On the run of the second day from Rushmere Club to Port Huron and return, Narmada lost 22 points for the same cause, and Kathleen dropped from the perfect list on account of some slight trouble with her coil, five points being charged against her when she checked in for the night.

On the second day out the boats encountered a strong breeze which kicked up a lively sea, but that only added zest to the trip combined with the bright cloudless sky overhead, and everyone was happy. At night it was announced that the committee had made some changes in the course so that the boats would sail along the south shore instead of crossing Lake Erie. It was also decided not to run on Sunday as the owners were in favor of having a day to rest up.

The third day out passed with only one deduction being made, Kathleen loosing one more point for an adjustment of her coil, making her penalization six points. The third day passed with no further loss of points.

The trip to Put-In-Bay included many pleasant little incidents. Off Detroit the fleet received mail through the marine post office just as if they were full grown freighters, and all along the river they sighted friends of the contestants who megaphoned their good wishes.

At Put-In-Bay as at every port along the route save one where she was delayed by a late start, L. E. R., Jr., Dr. Russell's fast cruiser was the first boat in. This achievement was nothing difficult for her, for be it known that although she is a cruiser and ran with a perfect score all through the run, L. E. R., Jr., is equipped with no ordinary slow-speed motor such as is the fashion among cruising craft. Her power plant is a 90 H. P. Buffalo racing engine, and that it ran the whole distance without a skip excited no small amount of comment all along the course.



Sea Wolf, Janet, L. E. R., Jr., and Narmada, all received perfect scores except the last.

At Toledo the cruisers were given a rousing welcome by the Maumee Yacht Club. The club house was beautifully decorated in honor of their coming and the veranda and balconies were crowded with people to welcome them. The after dinner program included a canoe and small boat carnival, followed by a dance. There was no trouble encountered in making the run from Put-In-Bay and all the boats checked in ahead of time and no penalties were imposed on the run save an addition of 10 points to Narmada's black marks for adjustment of the air compressor and some added points for Kathleen, due to more trouble with her coil which brought the number of marks against her up to 42 points.

During the banquet in the evening of the cruiser's arrival at Toledo, Commodore P. C. Jones presented each of the contesting boat owners with a bronze shield bearing the inscription "Maumee River Yacht Club, Scripps Cruise, 1911." Commodore F. R. Still, of the Detroit Motor Boat Club, presented each of the four commodores at the dinner with bronze medals.

It was Saturday afternoon when the cruisers reached the Lakewood Yacht Club, Cleveland. Narmada had added eight points to her former loss through blowing out an exhaust valve and a broken ignition rod pin. Kathleen's skipper had given the bell rope too vigorous a jerk with the result that it parted and she lost 19 points more. On the preceding day the boats had stood a heavy sea, fighting their way from Toledo to Sandusky, but on the run from Sandusky to Cleveland the seas had subsided and the run was delightful in every way despite a "dead swell," which made the going hard for a while and tested the rough-weather qualities of the boats. During this rough spell Mrs. L. E. Russell, the only lady making the cruise, won general admiration for her seamanship. Despite the tossing of the little L. E. R., Jr., she stayed on deck all day long, and confessed that she was having the time of her life.

Sunday, spent at Cleveland, was a quiet day. Most of the men on the cruise spent the better part of the day in an effort to catch up on sleep. The most important event was the withdrawal of Kathleen by her owner T. R. Donavan, Mrs. Donacan being ill in Detroit.

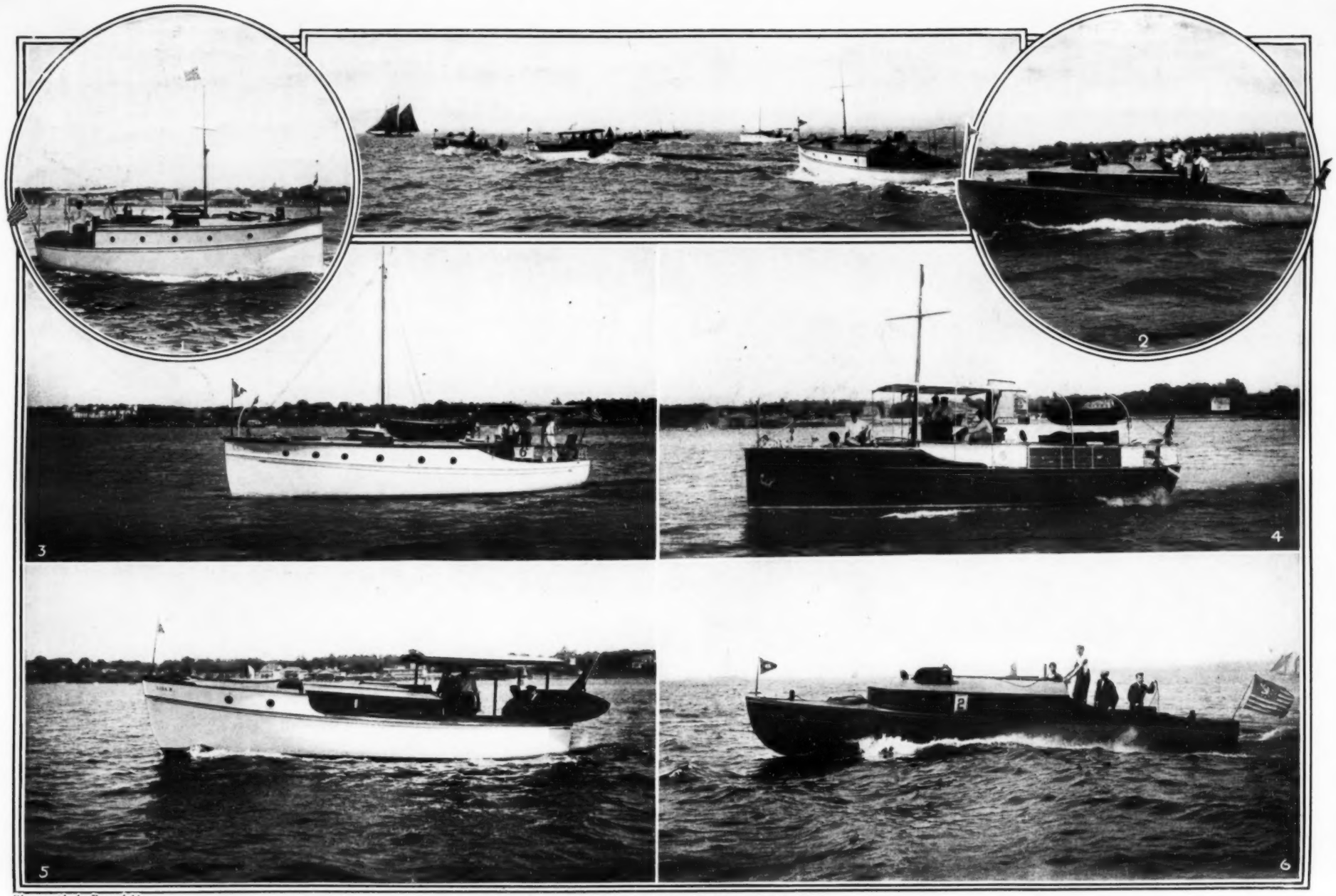
This left Narmada, carrying the judges and other cruise officials, and four boats with perfect scores, and thus the score continued to the end.

The run from Cleveland to Erie on Monday was the longest and the hardest endurance test of the whole eight days, but Narmada was the only boat that lost any points. She came through the day with six black marks, due to the sticking of an inlet valve.

It was raining hard when the little fleet got under way for Erie Monday morning and the disagreeable weather continued for hours. To make matters worse there was quite a fair sea rolling, and as they sailed along close in to the Ohio shore the cruisers encountered a squall which lasted about an hour. This was one of the worst pieces of weather in the whole trip, but in spite of it every one made the Erie Yacht Club at least an hour ahead of his running time.

The final leg of the cruise Erie to Buffalo began beneath an overcast sky with very little prospect of pleasant weather for the day. When they were well on their way the rain suddenly came down in torrents and most of the sailormen were drenched to the skin before they could get into their oilskins. The rain was accompanied by wind and for a time several of the boats feared that they would be forced to seek shelter at Dunkirk but the storm gradually subsided and long before the cruisers reached Buffalo the sun was out with hardly a cloud in the sky.

As the four boats, Inamic, L. E. R., Jr., Sea Wolf and Janet each had perfect scores, the judges were for a time "up a stump" and tried for 24 hours to pick a winner. At last they gave it up in disgust and gave each a prize. The Pirates cup was awarded to Inamic for best all round performance. The Maumee River Yacht Club cup was awarded to Janet and the Judges' trophy to Sea Wolf and the Delco Ignition lighting outfit to L. E. R., Jr. As the four winning boats were all sailing under the colors of the Detroit Motor Boat Club the Commodore Scripps' trophy was awarded to that organization under the terms of the gift.



Photographs by Rosenfeld.

The Fire Island Race of the National Yacht Club.

Kitsix, owned by F. D. Gheen, and shown in insert No. 1, won first place in the regular class and G. W. Hoertel's Francis H., was second on corrected time. Francis H. also won first in the special class. The other boats are: 3, Canadice, owned by R. S. Mills; 4, Bedouin, owned by F. S. Salomon; 5, Lida M., owned by C. P. Holland; and 6, Inevitable, owned by H. A. Johnson. The photograph above is of the start.

Loafing Along on Lounger II.

The Start of a World Cruise in a Motor Yacht Designed and Built for the Purpose. Something About the Vessel and Her Crew and the Plans of the Party on Board.

By Kinsley Wilcox Slauson.

Photographs by Levick and Spooner & Wells.

THERE is a certain sense of satisfaction to a man who loves the water in being able to stop aboard his yacht with the knowledge that its decks are to be his permanent home and if he doesn't approve of the place where he is located he can give the sign to his captain and have his home moved wherever he will.

Such was the satisfaction of James B. Hammond, of New York City, the originator of the typewriter which bears his name, as he boarded Lounger II upon August 3rd and gave the order to proceed up the coast. This was the start, the second one, to be sure, but nevertheless the official start of a craft which will wander from port to port, at her owner's fancy, perhaps staying upon the Atlantic seaboard for an indefinite time, or perhaps going direct to far-away seas. Mr. Hammond expects, before the journey of Lounger II is ended, to take her to practically every port and through practically every navigable waterway of the earth. In this the vessel is unique; she starts out with the purpose of bringing her owner enjoyment whether it be on this side of the ocean or the other, but with the idea of eventually returning after girdling the globe. No set program has been made out, however, and it is likely that residents along the Sound or upon the Maine coast may catch glimpses of her from time to time until late in the fall.

Lounger II was constructed from the designs of her owner by the New York Yacht, Launch & Engine Co., of Morris Heights, New York City, and is 95 feet in length overall, with a waterline length of 85 feet 1 inch, a beam of 17 feet and a draft of 4 feet. She is equipped with a six-cylinder, 100 horsepower Twentieth Century motor and can make about 15 knots at a maximum, although her cruising speed will approximate 12 knots.

A visit aboard the vessel as she lay upon the ways preparatory to launching disclosed her ingenious arrangement below decks and the means provided for the comfort of the owner and his guests. Lounger will cruise in tropical waters as well as in the cooler waters of the North and for this reason she is equipped throughout, saloon and staterooms alike, with cold air registers. The air is cooled from a refrigerating plant built to supply the cold storage system, so that in addition to the plan of having "iced air" on tap at the turn of a valve, the lack of ice need never be felt.

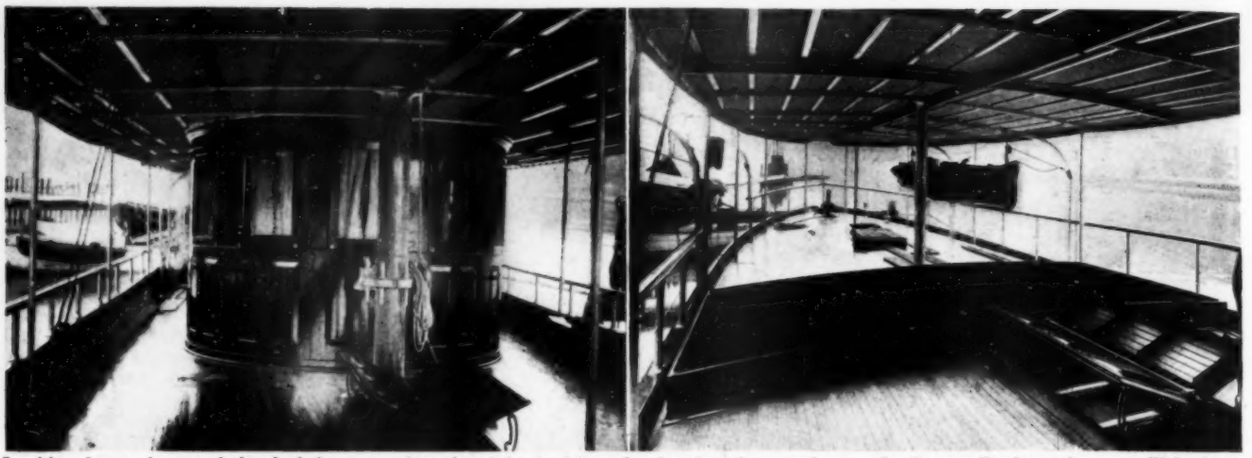
James B. Hammond, owner of Lounger II, and "Pinkie," one of his traveling companions.

When the water becomes a bit monotonous, as it is bound to do at intervals, especially when one plans to spend 25 or 30 years upon its depths, the craft may be steered for the nearest port (the condition of the roads having been first thoroughly investigated) and the large Panhard car which is carried aboard in the vessel's "garage" will be brought into service. Time is of no moment and the people of those spots at which the owner feels a desire to motor may see the yacht anchored in their harbor for but a few hours or perhaps for several weeks. Mr. Hammond's chauffeur forms one of the party and it is expected that he will be largely instrumental in selecting likely-looking landings for motoring trips.

The culinary arrangements upon the vessel have been carefully planned and the cook, who is the captain's wife, is an adept at the art of providing tempting dishes. The dining saloon is in the deckhouse and a dumb-waiter at the after end, next to a stairway, gives access to the galley immediately beneath. And the cook will really have no excuse for serving even one dish in anything but the best of style. Mr. Hammond is an enthusiastic fisherman and having decided that fresh fish are more to be desired than two bathrooms, for one of the latter he has substituted an aquarium with plate glass panels opening to the passage running amidships between the staterooms. This aquarium will be stocked with fish of various kinds which may be kept until required for the table.

The quarters for the crew are all in the after part of the vessel and allow plenty of

Lounger II at the yards of the New York Yacht, Launch & Engine Company, just after her launching. It will be seen that she is equipped for wireless telegraphy.

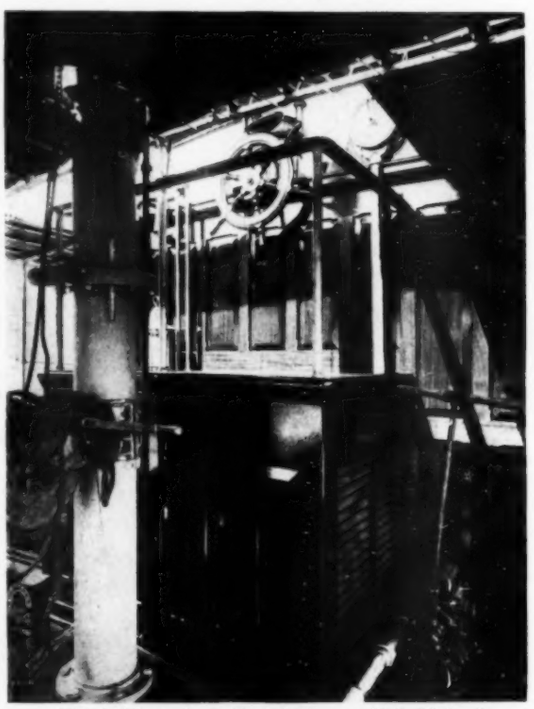


Looking forward toward the deck house, and at the right, looking aft, showing the opening to the "garage" where the car will be kept in "live" storage.

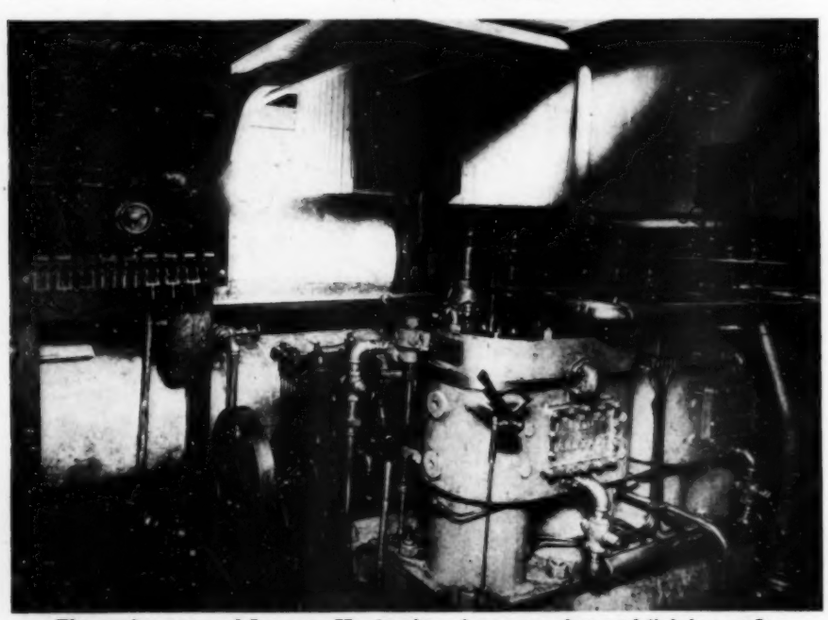
room with a large amount of locker space. The captain and engineer each has a stateroom to himself and the remainder of the crew are cared for in four berths aft. Practically half of the entire vessel below decks is given over to the use of the owner and his guests and this space is entirely in the forward part.

The crew of Lounger II are under the command of Captain Into, who hails from the Arctic Circle and who is probably as expert a navigator as ever handled a vessel upon a "round the world" cruise. Captain Into has never been back to his home since he left it a good many years ago, and it is Mr. Hammond's intention to visit it with him aboard Lounger.

With the captain's wife as cook and their son as the wireless operator, the craft is fortunate in being managed by capable hands. The remainder of the party includes a sufficient number of able seamen in addition to Mr. Hammond's personal attendants and those who will assist him in his business affairs. For this cruise is to be by no means a strictly pleasure trip, though it is safe to say that the owner of Lounger II will have at his hand every facility for his comfort and there will be but few times when the blue flag of absence will be seen flying.



The bridge where Captain Into will hold forth.



The engine room of Lounger II, showing the power plant and lighting outfit.

Since Mr. Hammond personally designed his craft, and since the novel features which have been worked into the arrangement are his own, he naturally took a great deal of interest in her construction. Every day at 11 o'clock, from the time her keel was laid until she first took the water at the last of June, Mr. Hammond arrived at the yards of the New York Yacht, Launch & Engine Company and spent some time inspecting the work and making small changes as different ideas occurred to him.

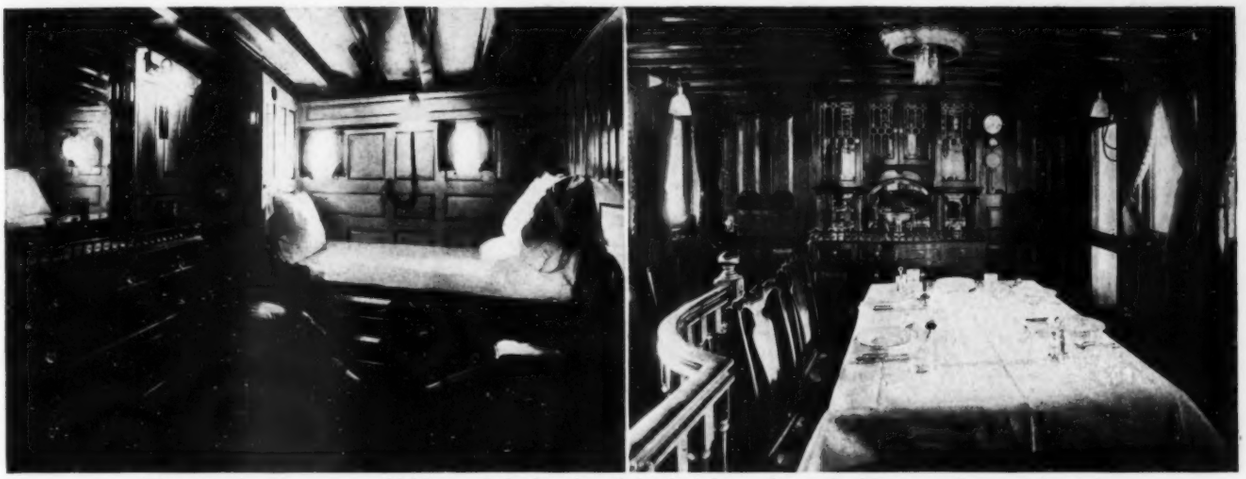
For the business side of the trip Mr. Hammond will visit the various Hammond typewriter agencies scattered throughout the different ports of the world. His wireless apparatus will keep the vessel in touch with his office at all times through relays and if necessity demands, Mr. Hammond expects to "desert the ship" long enough to make a trip to the office by rail when possible.

Lounger II, as her name implies, is the second boat owned by Mr. Hammond, and her predecessor, which is still in active service after having traveled thousands of miles, was built from a small model designed by Mr. Hammond. She is a sloop-rigged auxiliary about 50 feet long and is equipped with a 40-horsepower motor. The original Lounger has been a familiar vessel along the Atlantic coast for a number of years is still owned by Mr. Hammond.

As for Lounger II's itinerary, there is none. She made one start and was forced to return to have her motors properly adjusted and the opportunity was taken at this time to make some minor improvements in the construction of her interior arrangements. Before starting Mr. Hammond expressed a desire to cruise up the coast to the Gulf of St. Lawrence, up the St. Lawrence River and through all of the Great Lakes, eventually finding his way to the Mississippi River. From there he expects to cruise to the Gulf, down through the Carribean Sea and up the Orinoco River as far as the depth of water will allow. When this trip is completed, Lounger II will make for some European port and will remain in foreign waters without doubt for a number of years, visiting all the important points.

Mr. Hammond does not like to have it said as has been the report, that he is starting out upon a 28-year cruise. "For," said he, "a person who would embark upon a 95-foot yacht with a definite and fixed idea in his mind to remain aboard that yacht for a certain length of time, would really miss half the fun of the sport. The enjoyment of yachting lies in being able to go where one wishes when one wishes, and if one doesn't wish to go at all, there's enjoyment in not being obliged to go.

"I have designed my yacht after my own ideas and I have had enough experience to know what I want. You see there aren't many



The owner's stateroom, amidships, and the interior of the deck house forward which is used as a dining saloon.

boats that have provision for carrying an automobile aboard. I am fond of the water, but then, too, I've always blessed the man that invented the motor car. I can travel all over the world now, if I feel like it, but let me say again that the best part of my program is that I don't have to if I don't feel like it.

"And business troubles don't worry me either. You see my wireless outfit, with a capable man to handle it, will keep me in touch with the office and even when I'm on my way across the ocean I'll rarely be far enough away so that a message cannot reach me when relayed from some vessel.

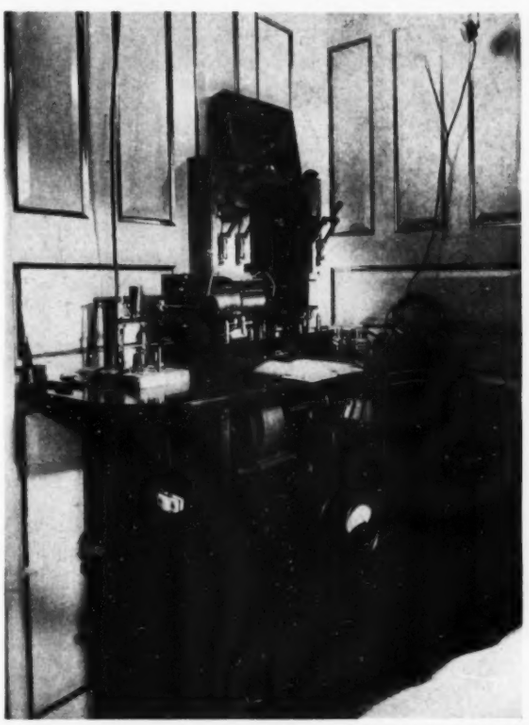
"I'm independent of railroads, too, and that's a great thing. Of course, if I should be cruising along the coast and my return would be absolutely essential, I can take a train, but for the most part I am very hopeful that the rest of my travels will be confined to my boat or the automobile.

"I have fitted out Lounger II for cruising in the tropics or near the Arctic Circle. My captain comes from the latter place and I rather think he'll carry me back home with him before we get through. I've always had a desire to go 'way up North and there's no reason now why I can't. On the other hand, if we find we like warmer climates better, we can be very comfortable, even when the sun is hot enough to blister the paint on the hull. That refrigerating plant is a good one and it will keep us cool below decks, even if it's too hot to go out.

"Some people have wondered why I didn't put a stack on my boat. Well, in the first place, it isn't necessary, and in the second place Lounger II is built for comfort and I'm not willing to sacrifice valuable space for appliances that don't mean so very much. We've seen to it that there is ample ventilation below decks and, of course, we can easily keep the temperature at almost any point desired. I did at first even begrudge the space occupied by those two masts, but that doesn't worry me now. The addition of the wireless will prove of more use than the space occupied by its support could ever bring."

Mr. Hammond is proud of Lounger II and he has a right to be. She is built with an idea for comfort clear through and her construction is so substantial that a close examination would dispel all doubts as to the practicability of so comparatively small a craft attempting a journey across the ocean. She carries 1,600 gallons of gasoline, which at her rate of consumption, should take her almost two-thirds of the way across the Atlantic and there is space provided where another 1,600 gallons can be easily stored in reserve. Lounger II's 100-horsepower motor will use approximately 10 gallons of fuel per hour and she can very easily maintain a cruising speed of 12 miles per hour and probably one or two miles per hour more.

One of the most important members of the crew, and one who has not been mentioned, although Mr. Hammond considers him a valuable addition to the party, is his dog, Pinkie, who is the constant companion of the owner of Lounger II. He has inspected the yacht with his master from the time her hull was laid and he knows her lines as well as anyone. Pinkie plans to travel wherever Lounger goes, and he has his own private seat in the automobile as well, so that he need not be left behind when the party takes to traveling on land.

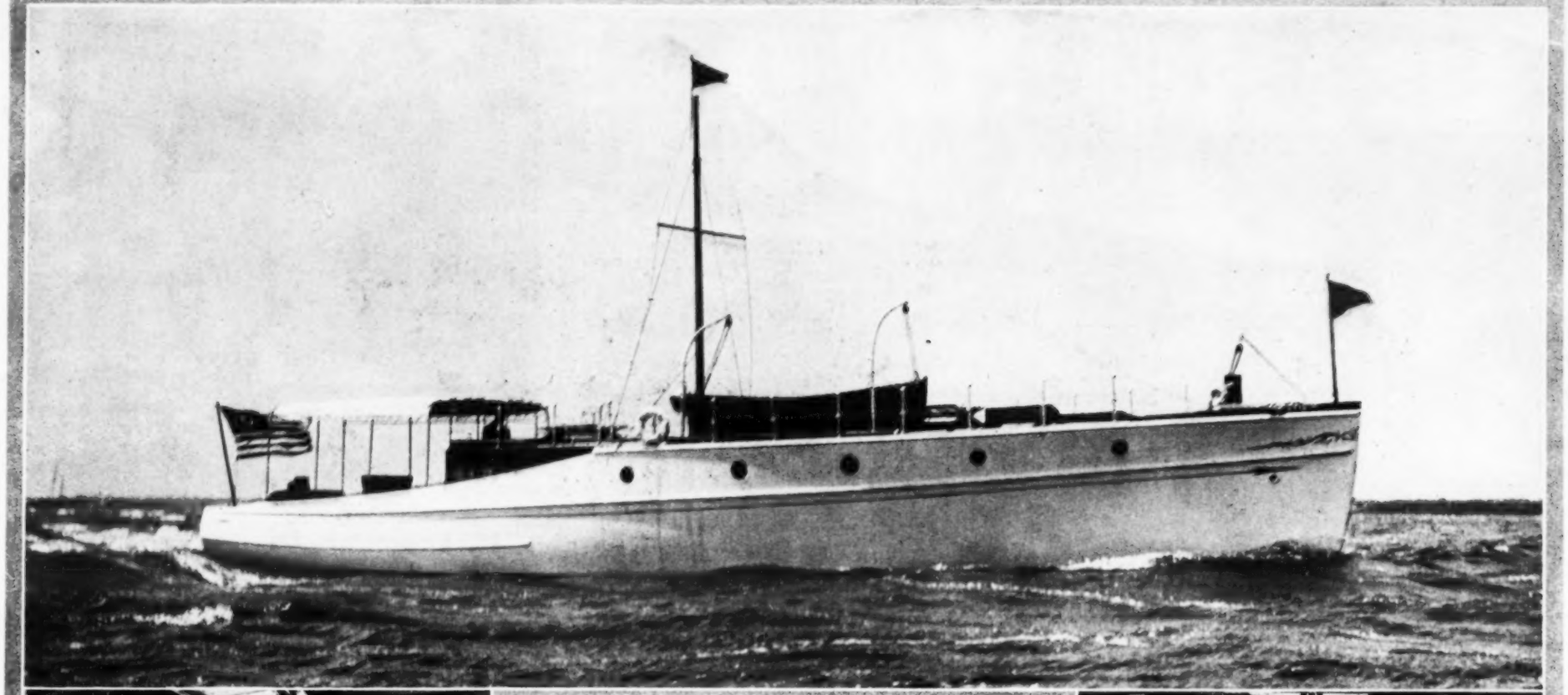


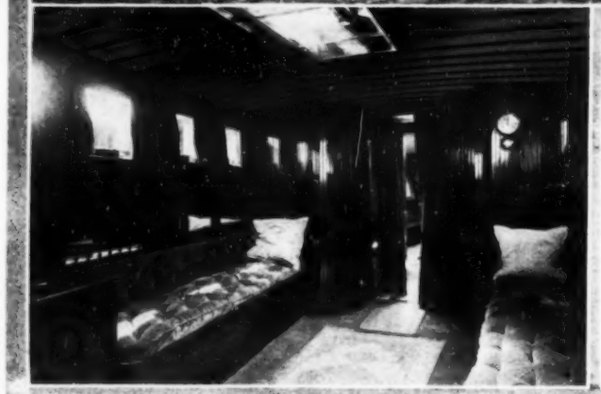
The wireless receiving and transmitting instruments.

To be absolutely independent, to be free from railroads and steamships, and schedules and itineraries, to be free to go wherever and whenever the spirit moves—such has long been the dream of Mr. Hammond. And now the dream is about to break into a glowing reality.

Furthermore, the facilities and appurtenances, including the "land tender" Panhard, of Lounger II, are such as to permit that this absolute freedom and independence of time and place should be accompanied by a maximum of comfort and convenience such as has seldom, if ever, been attained on a world cruise.

The members of Lounger II's sailing list taken just before her departure.





Weepoose, a 60-Foot Raised Deck Cruiser.

Length over all ..... 60 feet.
Beam ..... 12 feet.
Draft ..... 3 feet, 6 inches.
Motor, 60 H. P. 6 cylinder Lamb with double ignition.
Speed, twelve miles per hour.
Designer, Morris M. Whitaker, New York City.
Builder, Salisbury Marine Construction Co., Salisbury, Md.
Owner, Charles L. Thorne, New York City.

Weepoose, a New 60-Footer.

WEEPOOSE is a new boat, and one of considerable interest, as will be seen from the photographs on this and the opposite page. She was designed by Morris M. Whitaker, for Charles L. Thorne, for general cruising and for use in connection with his summer place at West Islip, Great South Bay. The contract for her construction was let to the Sharptown Yacht Building Company, of Salisbury, Maryland, but when the boat was about half completed this company went into voluntary liquidation, and the boat was finished by the Salisbury Marine Construction Company, of the same place.

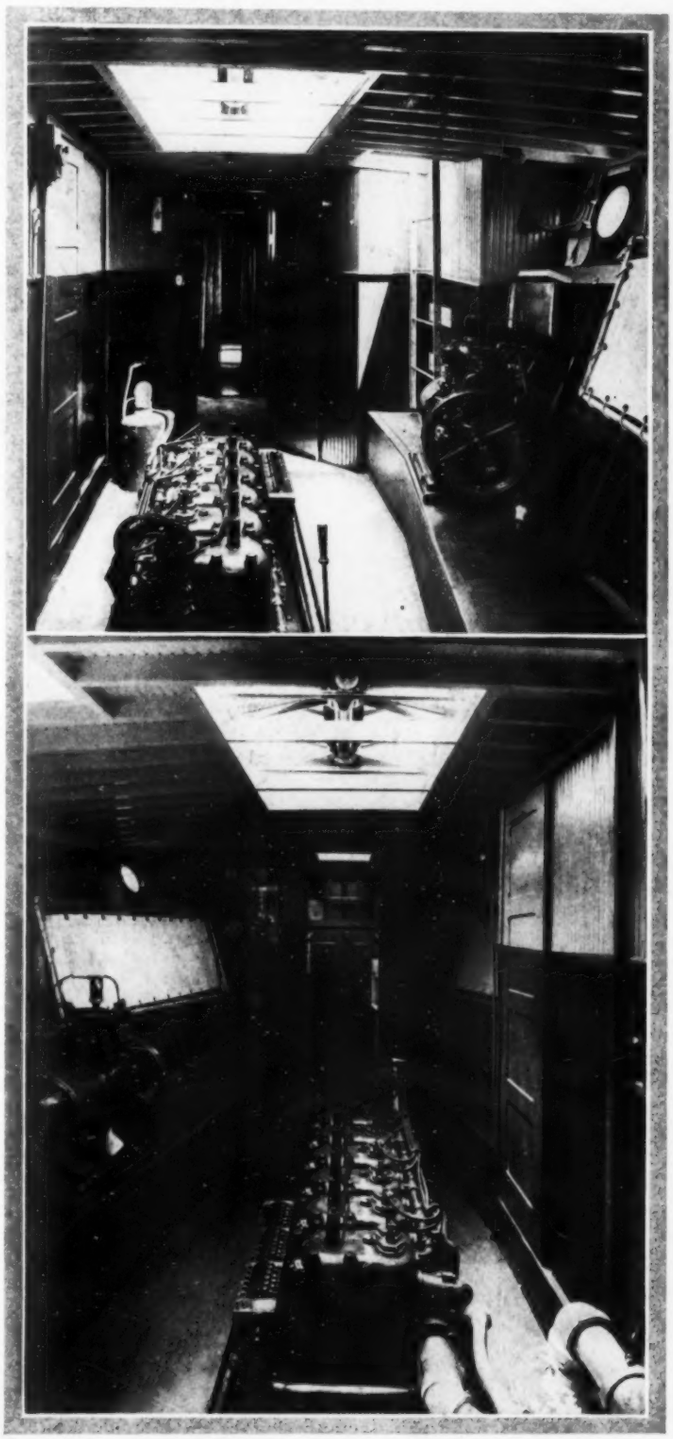
In general design, Weepoose is of the raised deck type, sixty feet overall, by twelve feet beam and three feet six inches draft. The raised sides which are flared considerably forward, extend to a little abaft amidships from which point they drop in a long sweep to the stern, the deck extending some distance farther aft as the roof of the trunk cabin. The bow is of the canoe type, slightly curved and raking, and the curved transomed stern raking in the opposite direction balances it nicely. From a point about amidships there is a decided tumble home to the top sides aft.

There is no deck house, and the only obstructions on the raised deck are the hatches and skylights, and there is consequently a lot of available deck space besides the cockpit. The deck is but slightly crowned and is completely surrounded by a cable railing.

The interior arrangement of the boat is interesting, and is rather originally worked out. In the bow, just aft of the watertight collision bulkhead, is a well equipped galley, occupying the width of the boat and containing a large ice chest across its forward end, so arranged that it may be filled from the deck.

As may be seen from the lower photograph on this page, this compartment is completely isolated from the rest of the boat.

The engine room is next aft, and a good idea of its arrangement may be obtained from the two photographs on this page. There are seats along either side at the forward end, with a pipe berth above each so that a crew of two men may be comfortably accommodated in this compartment. The engine is a sixty-horsepower, six-cylinder Lamb, and is installed so as to be thoroughly accessible from all sides. To starboard of it is the crew's toilet room, and to port are the electric lighting plant with its separate motor, and the hatchway leading to the deck above.



The engine room looking aft and forward, showing the 60 h.p., six-cylinder Lamb motor and the separate electric lighting plant.

Double doors lead from the engine room to a passage connecting it with the main saloon, which occupies the space beneath the cabin trunk. On the starboard side of this passage there is a single stateroom and just aft of it a toilet room, with which it connects. On the starbboard side there is a larger stateroom, with a large hanging locker and with double doors, which when thrown open, extend across the passage and connect it with the toilet room and close the passage at both ends.

The main saloon, the aftermost compartment, is well lighted by the windows in the trunk sides, and by a large skylight. It is the social center of the boat, as well as the dining saloon. On either side forward there are extension transoms, with locker space beneath and behind them, and alcoves above, and aft of these on the port side is a buffet, with a locker above it, and on the starboard side another large locker with double doors. Two doors in the bulkhead lead to the large storage space beneath the cockpit floor, where steamer trunks, provisions and other equipment may be stored. The companionway leads up to cockpit on the starboard side.

The cockpit is unusually large, and, with the exception of a seat across the after end, and a steersman's platform to port at the bulkhead, it is left clear for wicker chairs. The fresh water tanks are installed beneath its floor, and under the after deck are the two gasoline tanks of 117 gallons' capacity each, placed aft so as to counteract the weight of the engine forward.

Weepoose is strongly but lightly built, the planking being of cedar, and the double framing of oak. The finish in the living quarters below is in mahogany, with the exception of the ceilings, which are done in white enamel. The engine room and galley are finished in cypress.

Weepoose, her designer explains, was intended primarily for day fishing trips off the south shore of Long Island, and her large deck space and cockpit, with its removable awning, make her very well adapted for this purpose, although nothing has been omitted from her appointments that is in any way required for extended cruising. A crew of two men is comfortably accommodated in the large engine room, and the two staterooms with their folding Pullman berths, and the extension transoms in the main saloon, provide comfortable quarters for about six persons.

The boat in a number of respects is characteristic of the practice of her designer. She has the long, easy sweeping lines both in plan and profile, the canoe bow and raking transom stern that characterize a number of Mr. Whitaker's designs, and in her construction also she follows a lead that has proved successful in a number of her predecessors, *i. e.*, in the manner in which her longitudinal system of bracing has been worked out.

There are two watertight double diagonal bulkheads, one just aft of the fore peak, and the other at the stern just forward of the gasoline tanks, isolating them completely from the rest of the boat.

During her recent trial, Weepoose developed a speed of over twelve miles an hour, and was thoroughly up to the expectations of everyone concerned. The boat is steered from a platform at the bulkhead on the port side and is controlled also from this point so that she may be handled by one person. She carries a tender on davits to port and a signal mast is stepped about amidships adding to her trim appearance. The photographs here taken during Weepoose's trial run.

Ednada III, a 90-foot houseboat with many of the desirable features of the cruiser.

Ednada III, Mr. George C. Thomas, Jr.'s, new houseboat was designed, built and fully equipped by the Mathis Yacht Building Co., of Camden, N. J., in ninety days. She is 90 feet over all with 17 ft. 6 in. beam and 3 ft. 6 in. draft; her lines are pleasing and her speed is about twelve miles an hour. She has separate electric lighting and heating plants, is propelled by two 60 h.p. Craig engines and combines the most desirable qualities of both the houseboat and the cruiser.

Wilmington to Wildwood.

The Seventy-Five Nautical Mile Motor Boat Race in Which Thirty-Three Cruisers Competed The Baby Nor'Easter and Many Exciting Events That Made the Run a Memorable One.

By E. H. Rosenberger.

STARTING thirty-three boats in a seventy-five nautical mile race over a course combining river, bay and ocean sailing is in itself a record to be proud of. This, with many other features, make the Wilmington to Wildwood open races stand preëminent in the season's list of events. The races were sailed on July 28.

Gathered in the race were many of the crack racers along the south Jersey coast and around Philadelphia, and the day's sport furnished topics of discussion that will keep the navigators busy talking it over at the club fireside during the coming winter months, and will serve to enliven many an evening when the skippers get together and sail over the races of the season.

They will tell about the stiff gale they ran into after passing out of the Delaware Bay into the ocean and up the coast, how the combers ran mountain high at Hereford Inlet, making it hazardous to attempt to cross the bar to Anglesea, after having passed the stake boat anchored outside; how Harry Hoffman, vice-commodore of the Wildwood Yacht Club, was washed out of the cockpit of the cruiser May by a big wave and swept overboard, and how he struggled in the surf for twenty minutes, until hauled in by his rescuers; how Marguerite II, after crossing the bar swept aground and was held there for six hours, until the tide lifted her from her perilous position; the experience of the Albatross, the flagship of the Stone Harbor Yacht Club, owned by Commodore James Thompson, which was disabled by running into a storm at the rips off Cape May on her way to the starting point, her hurried repairs at Essington-on-the-Delaware, her entrance in the race only to encounter a second heavy blow, but finishing within the prescribed time; and many other incidents which went to make the race the most talked of along the coast and about Philadelphia.

The starting line was off the Wilmington Yacht Club on the Delaware River, and was down the Delaware to the Capes and around to Hereford Inlet, off Anglesea, just above Wildwood. The race was run jointly under the auspices of the Wilmington Yacht Club and the Wildwood Yacht Club. There were three classes: Class A, cabin cruisers over 40 feet over-all length; Class B, cabin cruisers, 40 feet and under over-all length; Class S, speed boats.

The race was run under the 1909 rules of the American Power Boat Association, with slight additions and modifications to the rules because of the novel character of the race. The start was a spectacular one, and the starting arrangements were perfected with the intention of causing the finish of all boats to be about at the same hour.

Class B, started at 10:40 o'clock at night, or rather the first boat, was started off at that time and others followed in succession according to their handicaps. The last boat to start of this class crossed the starting line at 12:49 midnight. Because of the night start, boats came up to the slip at the end of the pier and waited for the starting gun with engines running.

Class A, the next class to be started, included nine prominent ocean racers in this section. Ilys, the scratch boat, and the winner, crossed the starting line at 5:00 a. m. followed in succession by the other seven, according to their handicaps.

Class C, for speed boats, had four starters, the first getting away at 8:30 a. m. and Elmaja II, the winner, at 10:03:54.

Weather conditions were ideal and the starters say the night sail was memorable. By morning a nor'easter set in and they ran into

(*Continued on page 70.*)

Results of Wilmington-Wildwood Race.

Winners: Class A, Ilys; Class B, Chelwood; Speed Boats, Elmaja II.

CLASS A—CRUISERS

Boat.	Owner.	Club.	Rating.	Start.	Finish.
Ilys	J. G. N. Whitaker	Yachtsmen's	41.94	5.00.00	11.20.00
Idaho	Peter Shields	Cape May	50.04	6.12.22	1.41.00
Marguerite II.	A. B. Cartledge	Keystone	53.10	6.34.21	1.50.00
Mariada	R. & R. Moore	Chelsea	51.19	6.20.37	1.51.30
Randalia	C. M. Beadencaf	Wilmington		6.31.00	2.37.30
Diablo II	J. A. & Thos. Hutchinson.	Woodbury	46.26	5.42.36	2.30.00
Julia II	Charles Class	Sea Isle City	61.56	7.32.09	3.11.30
Vixen	George King	Wilmington	52.60	6.31.00	3.36.30
Albatross	James Thompson	Stone Harbor	45.00	7.24.30	3.43.00

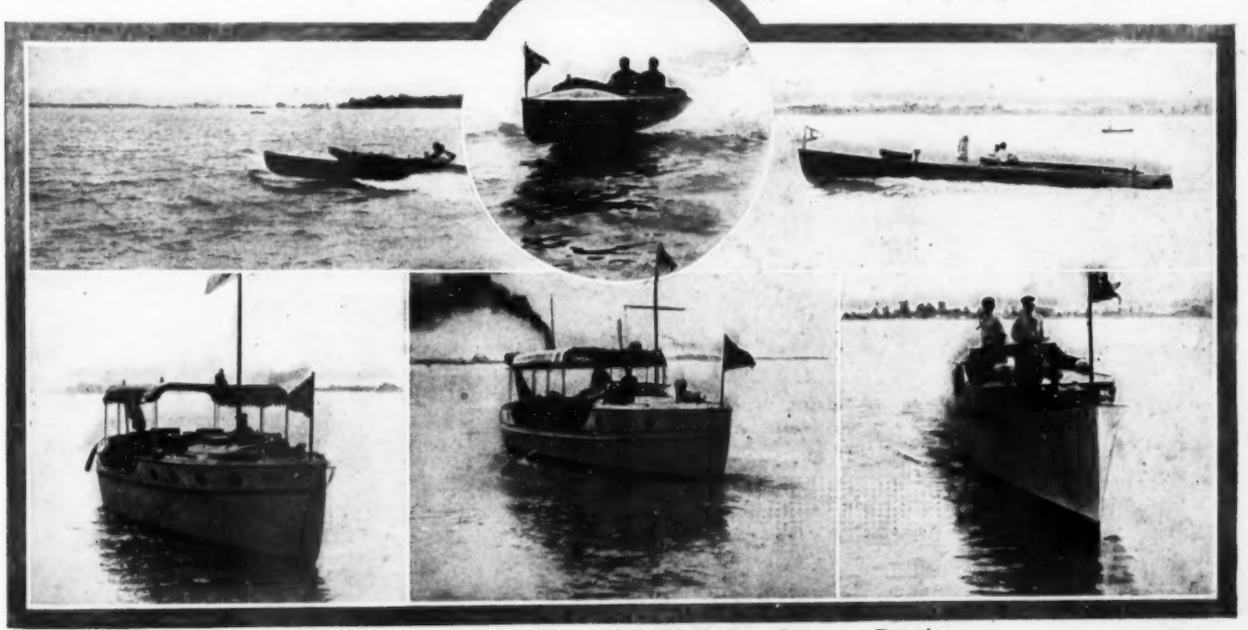
CLASS B—CRUISERS

Chelwood	R. K. Lenning	Yachtsmen's	39.42	11.09.30	8.57.30
Ben Riley	Geo. A. Bilyeu	Cape May	39.24	11.06.07	9.12.30
Aljoe	H. W. Molineux	West Phila	38.50	10.57.53	11.22.00
Cadet	Dr. E. P. Burnham	Wilmington	46.80	12.17.53	11.27.30
Elizabeth	Taylor Schaefer	Unattached	41.58	11.32.23	11.37.30
Mary	Henderson	Wilmington	44.38	12.02.07	11.52.00
May	H. A. Hoffman	Wildwood	38.48	10.57.53	11.52.30
Budd	J. O. Nelson	Flat Rock	48.96	12.49.01	11.55.00
Virginia II	Enoch Moore, Jr.	Wilmington	38.70	11.00.00	11.58.30
Eugenia	Dr. Eugene Swayne	Flat Rock	38.77	11.01.15	1.00.00
Eagle	F. W. Roth	Keystone	34.48	10.40.38	2.44.00
Wifeca	Carl W. Isenberg	Wilmington	39.90	11.14.16	2.55.00
Phantom II	H. D. W. Reichert	Yachtsmen's	42.41	11.41.21	*
Helen H	E. E. Mansell	Holly Beach	40.86	11.25.57	**
Spit Fire	C. E. Slocum	Wilmington	43.02	11.48.23	*
Adios	W. H. Ewing	Wilmington	40.00	11.15.41	**
Mascot	E. J. Mickley	Ocean Gate	40.87	11.25.57	**
Antlers	W. J. Patterson	Camden	44.28	12.01.56	**
Clare II	Dr. J. H. Drexel	Wissinoming	47.16	12.25.30	**
O. Camio	William Erb	Columbia	44.64	12.04.47	*

SPEED BOATS

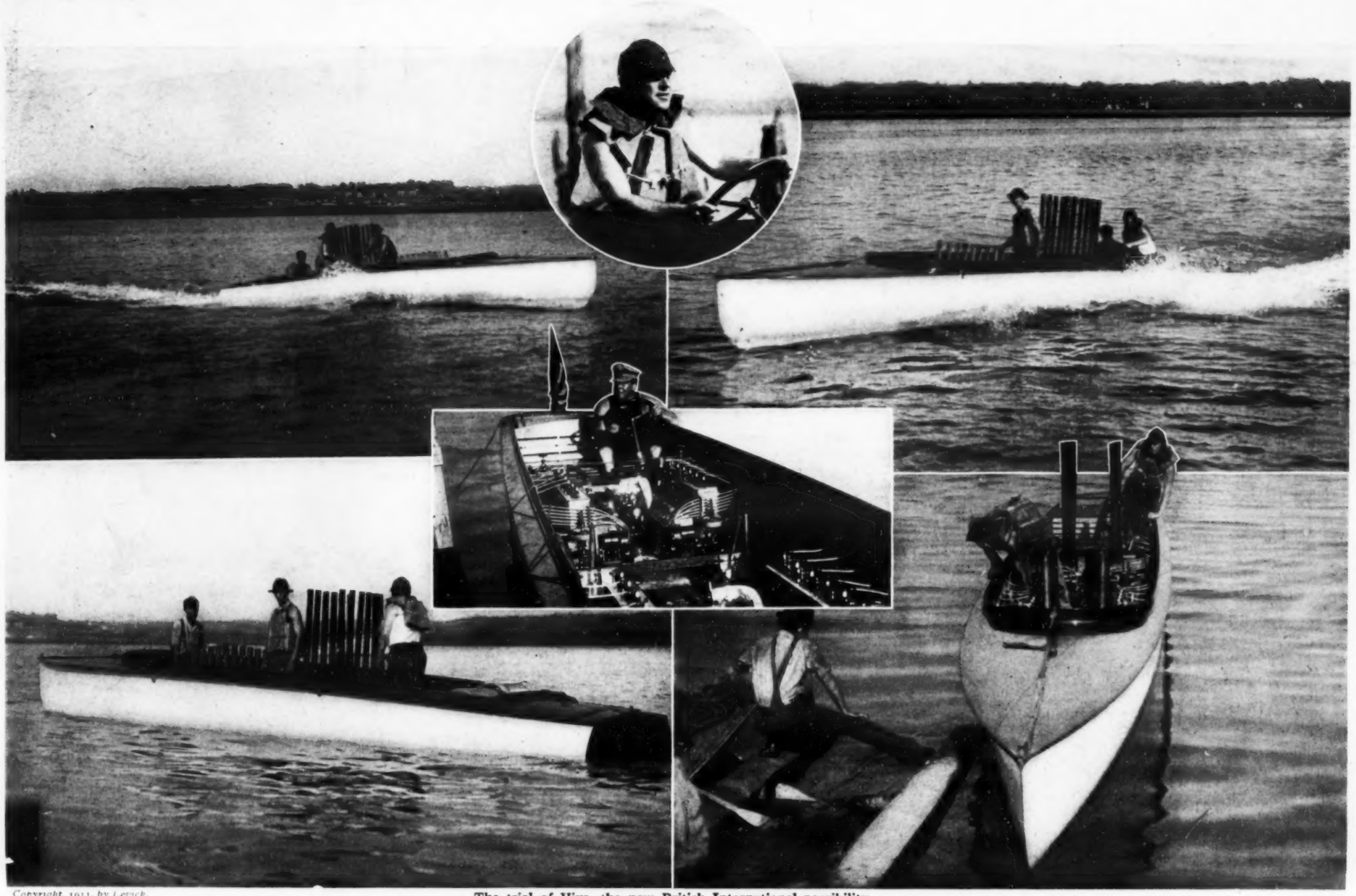
Elmaja II	James H. Glenn		94.21	10.03.54	1.30.00
Joker	J. C. Vanderslice		70.02	8.55.06	*
Ruric	R. N. Adams		73.89	9.09.35	*
Lady M	Robert E. Hand		64.13	8.30.00	*

*Not timed. **Did not finish.



The annual regatta of the Great Lakes Power Boat League at Detroit.

Above, two views of Kitty Hawk II, winner of the free-for-all, and Chimook, an interesting express launch. Below, three contestants in the handicap for cruisers: Puritan, Nomad II, the winner and Kolonah II, second. See page 45 for results of the races.



The trial of Viva, the new British International possibility.

Viva is the latest of the boats of international calibre to be completed in this country and phenomenal speeds have already been claimed for her. The hull is 32 feet over all and was built by the Dawson Boat Co., of Washington. It is powered with four Emerson engines of 100 h.p. each. During her trials J. Stuart Blackton, her owner, shown in the insert, was at the wheel and Victor L. Emerson, Jr., operated the engines.

How to Make a Pipe Berth.

Instructions and Drawings for Construction and Installation of this Type of "Sleep Producer." A Great Variety of Ways in Which They Can be Built. Ingenuity Displayed in Details.

THE PRIZE CONTEST—Answers to Questions in the July issue.

A Simple One.

The Prize Winning Answer.

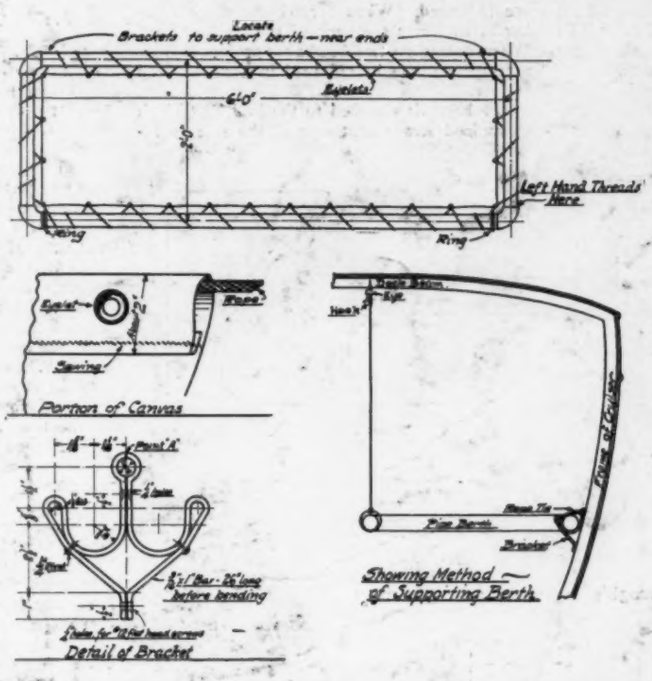
THE accompanying illustration with list of fittings following, should make it easy for the average boatman to construct a pipe berth.

The size of berth given here is 6 ft. x 2 ft., which is the average size, but a larger one can be made if space permits.

Regarding the 1 ell threaded right and left hand, in the following list of fittings: It would be just as good (and probably more easily secured) to get a standard righthand threaded ell and have your supply house run a lefthand tap into one outlet, cutting right through the right-hand thread already there. This method is commonly used in railing work and makes a joint strong enough for our purpose.

The small pipe threaded right and left hand is the last piece put on, and it screws into both ells at the same time, bringing the long pipes parallel when it is screwed up tight.

The drawing shows two brackets bent in one piece, to be sawed apart at point A after bending. These should be fastened, if possible, to the frames.



The method of L. R. Kelley.

The berth is held from coming out by the rope tied across brackets which prevents accidental displacement and yet makes it easily removable when desired.

One piece of 12-oz. duck 6 ft. 3 in. long (it comes 29 in. wide) is required, to be made as shown with brass eyelets spaced about 6 in. apart. The finished canvas should be 1 in. smaller all around than the inside of frame. 50 ft. of 5/16 in. rope will be required for hem and lacing.

Two pieces of ½ in. rope with hooks on one end, and tied to rings on berth at the other, are required to hold outer side of berth up, by hooking to eye in the deck beams above.

The entire outfit should not cost over $5.

List of fittings and pipe:

2 pieces 1¼ in. pipe, 5 ft. 10 in. long —R. H. thread both ends.
1 piece 1¼ in. pipe, 1 ft. 10 in. long —R. H. thread both ends.
1 piece 1¼ in. pipe, 1 ft. 10 in. long —R. H. thread one end, L. H. thread other end.
3 malleable iron ells, 1¼ in.—R. H. thread.
1 malleable iron ell, 1¼ in.—R. H. thread one outlet, L. H. thread other outlet.

All pipe and fittings to be galvanized.

L. R. KELLEY,
Philadelphia, Pa.

THE PRIZE CONTEST IN QUESTIONS AND ANSWERS

DUCK shooting time is coming. In the fall, too, the fishing is often at its best. In both of these sports the motor boat is a very handy article to have. A comfortably heated cabin interior, however, greatly enhances its comfort and usefulness for the hunter, the fisherman, and the belated vacationist who uses his boat during the clear, crisp days and cold, frosty nights of autumn. When it's too late in the year for twilight idling in the cockpit, clad perhaps in a pair of glasses and a tired, happy smile, that cabin filled with cheerful warmth and, at the same time, fresh, pure air, will look mighty attractive. Learn how you may have one easily and cheaply from the answers to the second question in this number.

BUILDING a pipe berth and keeping your cylinder walls free from carbon deposits are not exactly kindred subjects, but how to do each in the simplest and most practical way is among the things the motor boatman can't afford not to know.

THE QUESTIONS FOR THE NOVEMBER CONTEST ARE THESE:

Explain, with sketches, the best method of constructing a practical removable steersman's seat for the cockpit of a small cruiser.

Suggested by A. O. Goold, Portland, Me.

Describe a simple method of laying out a waterline on a boat.

Suggested by Chas. Macleroy, New York City.

Which of the following positions for the engine of a small cruiser is the best: 1, entirely under a hatch in cockpit; 2, clutch and perhaps part of engine under hatch in cockpit; 3, engine and clutch entirely within cabin?

Suggested by H. H. Parker, Oakland, Cal.

ANSWERS to these questions, addressed to the Editor of MoToR BoatinG, 381 Fourth Ave., New York, must be: (*a*) In our hands on or before September 25, (*b*) not over 500 words long, (*c*) written on one side of the paper only, (*d*) accompanied by the senders' names and addresses. (The name will be withheld and initials or a pseudonym used if this is desired.) Questions for the next contest should reach us on or before the 25th of September.

THE PRIZES ARE:

For each of the best answers to the questions above, *any article* advertised in MoToR BoatinG, of which the advertised price does not exceed $25, or a credit of $25 on *any article* advertised in MoToR BoatinG, which sells for more than that amount.

(*There are three prizes, one for each question, and a contestant need send in an answer to but one, if he does not care to answer all.*)

For each of the questions selected for use in the next contest, *any article* advertised in MoToR BoatinG, of which the advertised price does not exceed $5, or a credit of $5 on *any article* advertised in MoToR BoatinG, which sells for more than that amount.

For all non-prize-winning answers published we will pay space rates.

NOW a word about the prizes: We must insist that contestants state definitely what they want for prizes when they send in their answers or submit their questions. We must also insist that each contestant select some one article whose advertised price is either $25 or $5, and not a collection of different articles whose prices add up to either of these figures, or a credit on some advertiser to be used up as the winner sees fit. We would except, however, such articles, spark plugs, for example, as can easily be had by the half dozen.

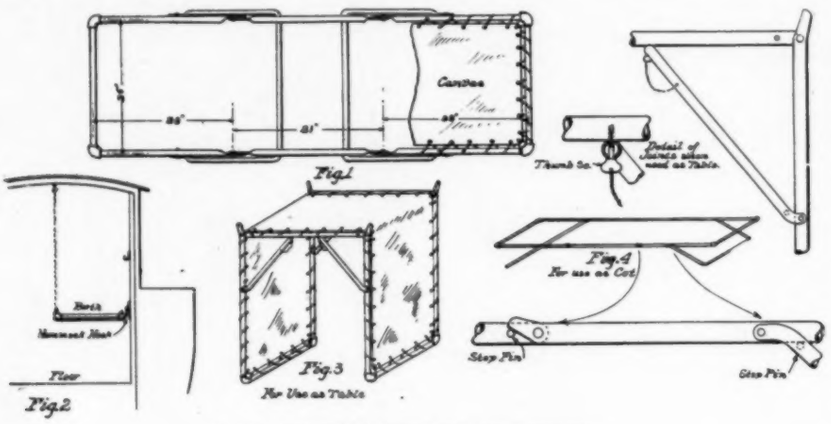
When you send in your answers, state what you will take if you win the prize.

Berth and Table in One.

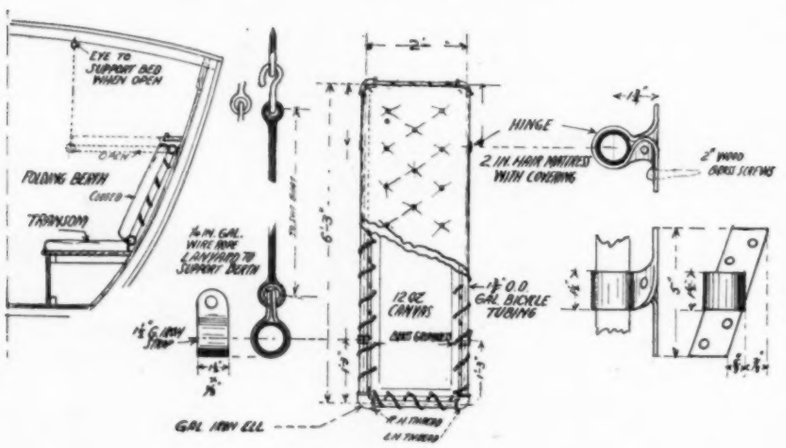
IN motor boats, where space is generally at a premium, it is sometimes advantageous to so arrange furnishings and, in fact, accessories in general that they may serve a double purpose. With this idea in view, the writer has prepared the accompanying drawings for a pipe berth.

In constructing this berth, the maker must take into consideration conditions aboard his boat and material at his disposal. For this reason only a few dimensions are given, the aim being to clearly illustrate the idea.

Referring to the drawings, Fig. 1 is a plan view of the frame with a small piece of the canvas to show method of attaching.



J. F. Cavanagh's ingenious arrangement.



Mr. Cassidy provides a hair mattress.

Fig. 2 shows method of attaching to wall of cabin. Two hammock hooks screwed to the cabin wall and two pieces of rope hung from the ceiling and arranged to engage the berth at about sixteen inches from each end will provide a support from which the berth may be easily removed. A hook on the wall above will hold the berth flat against the wall when not in use, while the long hammock hooks will permit of sufficient space for blankets and pillows between berth and wall.

Fig. 3 shows the end portions of the berth swung downward and the braces swung into position and locked by means of the thumbscrews to form a table.

Fig. 4 shows the frame of the berth in its normal position, but with the braces swung outward until the stop-pins on said braces engage the berth frame.

The frame may be constructed of iron piping flattened as indicated where the joints occur. The swing braces many each be made from one piece if desired. If the two arms on each brace are given a decided "set" from each other before riveting to the berth frame, it will help to counteract the pull of the canvas.

J. S. CAVANAGH, Providence, R. I.

Uses Hair Mattress.

THE berth frame is constructed of galvanized bicycle tubing, 1⅜-inch outside diameter. The ells at ends should have right and left hand thread to tie the sides together. A canvas bottom of 12-ounce canvas is laced to the sides and ends. A 2-inch hair mattress, covered with plush or leather, is quilted to the canvas bottom, where buttons are indicated. When turned down the folding berth forms the back of the transom seat. When swung up two berths are provided. This arrangement can be obtained in a raised deck cruiser.

The berth is attached to the hull by ⅛-inch galvanized straps bent around the side as indicated and fastened with 1½-inch brass screws to the ceiling or frames.

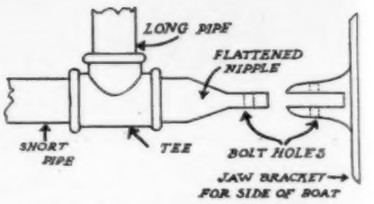
The inner edge of berth has two lanyards with straps to suspend the berth from the beams, and these lanyards also keep one from falling out of the berth.

If the folding berth is required for an engine room, an ordinary mattress can be laid on the canvas, with blankets and pillow, and the whole held in place by two canvas straps, one at either end, passed around frame and clothing and the whole turned up against the side of vessel.

A. B. CASSIDY, Wollaston, Mass.

Galvanized Pipe and Fittings.

AS the space which is available will have a great deal to do with determining the size of a pipe berth, I shall not attempt to give any dimensions. The frame is constructed entirely of ¾-inch galvanized pipe and fittings. The stock needed consists of two long and two short pieces of pipe for the sides and ends, two elbows, two tees, two short nipples flattened on one end and two jaw brackets.



F. M. Comee uses jaw brackets.

The long piece for the front has an elbow on each end, into which are screwed the two short end pieces. On the free end of these short pieces are the two tees, one of which has a left hand thread in the cross opening. The long piece for the back has a left hand thread on one end and is made into the tees, thus completing the frame itself.

The two short nipples with a hole bored through the flattened ends are made into the free ends of the tees. These fit into the openings of the jaw brackets and with a bolt through the arms and the nipples make a hinge which allows the berth to be swung back against the side of the boat when not in use and held there with a spring catch, out of the way. When dropped down for occupancy it may be supported at the proper place either by small ropes or chains run from the side of the boat or let down from the cabin top, and fastened on each outside end of the berth.

Canvas makes the best bottom, as the weather does not act upon it as it does upon rope. Of course, a bottom might be woven in of small rope without much trouble, but which would be quite slack sometimes and very taut at other times. For all cruising conditions the canvas seems the better. Cut it so that it will not quite fit the frame after turning a 1½-inch hem all around. Work cringles in the hem every 6 inches and then fasten in place, making a separate hitch at each cringle.

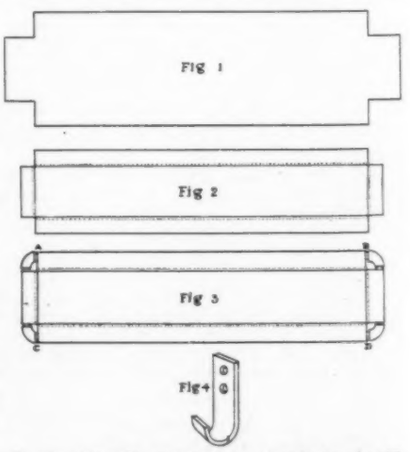
F. M. COMEE, Cambridge, Mass.

No Lacing Nor Hinges.

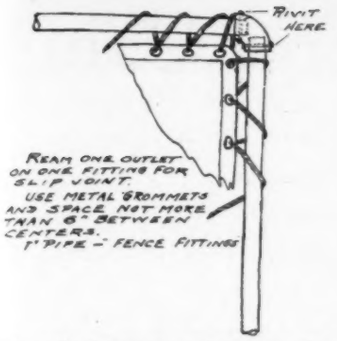
FOUR ells and four pieces of pipe are all that is required for the construction of the frame. Two of the straight pieces should be of such length as the builder deems necessary for the width of the berth, and the remaining two should be of the proper length for the side rails. Both ends of each section are threaded to receive the ells. The pipe should not be smaller than ¾-inch inside diameter.

A very satisfactory and easy method of covering the frame is to cut the material as in Fig. 1, then fold the edges over and stitch them as in Fig. 2. When the pipes are inserted into the hemmed portions and screwed into the ells the finished berth will appear as in Fig. 3. The material should be cut and stitched to such dimensions as will insure a little looseness when the berth is assembled.

For supporting the berth, provide two hooks as in Fig. 4, and attach them in the desired



F. K. Green's method is simplicity itself.



How C. Peterson makes easy the last joint.

place at such distances apart that they may support the berth at points A and B, Fig. 3, between the canvas and the ells. For supporting the other side two ropes may be fitted with a hook upon both ends, these ropes to support the berth by suspension from the ceiling, screw-eyes being inserted at the proper points, while the hooks upon the other end of the ropes engage the berth rails at the point C and D, Fig. 3.

F. K. GREEN, Salem, N. J.

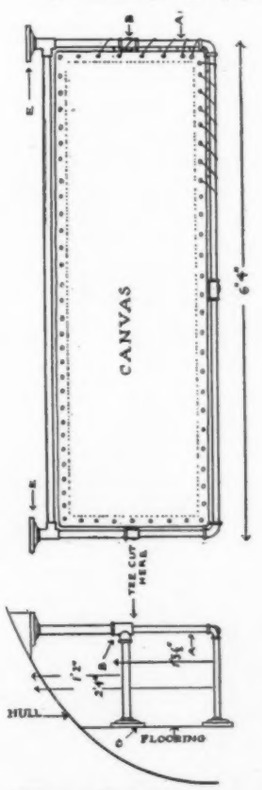
An Easy Method of Assembling Frame.

THERE is no trick to the assembling of a pipe berth frame if one outlet in one of the elbows be reamed out, forming a slip joint. The three sides go together very easily, and the fourth slips into the reamed out fitting. Special attention should be paid to keeping the corners square.

When the actual fitting is finished, drill a quarter-inch hole through both ends of each elbow and rivet. This effectually stops any skewing.

Standard pipe straps having four screw holes make about the best fastenings for the hinge side. For the "mattress springs" use 10 oz. duck.

C. PETERSON, Brooklyn, N. Y.

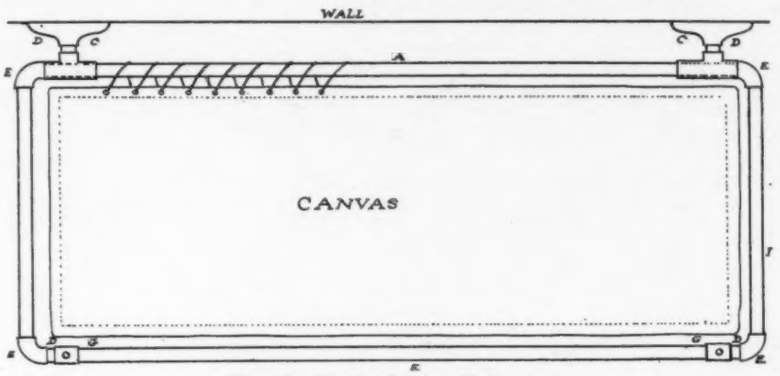


William York combines berth and seat.

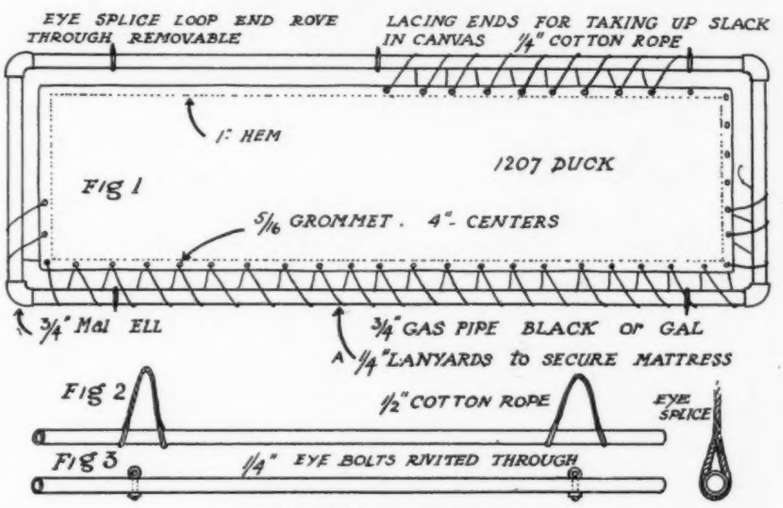
Simple and Practical.

PIPES A and A¹ should be of smaller pipe so as to slide through tee B and B¹, and pipe made fast to hull. At EE, a flange, close nipple and tee are put together, and at B and B¹ the tees are to be cut off each on one side. The flanges C and at the bottom of B¹ are to be screwed down to the flooring.

The pieces A and A¹ are each to have a hole drilled through the tee and pipe, so a pin can be put in to keep the outside of the berth in place. Also holes should be put in the pipe so as to keep the berth firm when closed. This berth should be made the height of the transoms in the cabin in order that it may be used as a seat when closed, by means of



The pipe berth of John Christmas.



F. K. Davis' arrangement.

boards cut especially to fit it.

The outside corner fittings can be easily obtained. The canvas should be strong and should be secured to the pipe by a strong cord passed through grommets.

WILLIAM YORK, New York City.

John Christmas' Method.

THE folowing fittings are required: One length gas pipe 6' x 9" x 1" (A); one length pipe 6' x 3" x 1"; two 1" flanges (C); four 1" close nipples (D); four 1" ells (E); two 1¼" tees, two 1" to ⅜" tees (single outlet ⅜") (G); two ⅜" close nipples, one length pipe 2' 4"x1" (I); one length pipe 2' 6"x1", two awning caps used in making awnings (L); four 2" hooks (M).

Screw one flange to the wall at the desired height, using large screws or bolts, and screw in a close nipple. Then screw one of the 1¼" tees on the nipple. To the 6' 9" piece of pipe attach an ell and run through the tee. Now screw the second hinge (flange, nipple and tee) together in the same manner as the first and slide it on to the pipe. Put on the other ell. Push the tee as close to the ell as possible and fasten flange to wall. Now build up the berth from left to right. Under the deck fasten hooks. A chain attached to the awning cap is hooked to the hooks in the deck at night and to the hooks in the wall during the day.

If two berths are hung from same wall, the lower one should have a leg of pipe with a cap on the end screwed into the ⅜" hole in the tee. JOHN CHRISTMAS, Pittsburg, Pa.

Uses Rope Loops.

THE sketch is self-explaining. The materials required are: Two pieces of ¾" pipe 6' 4" long and two pieces 2' long; four malleable ¾" ells; about 50' of ¼" diameter cotton rope; about 5' of ½" diameter cotton rope or 2¼" eye bolts; one ¼" eye bolt, and a 5" wrought gate hook; 6' 4" of 24" wide canvas; four dozen 5-16 brass grommets.

In Fig. 2 are shown rope loops upon the frame of the berth. This is the preferable way to hang it if the berth is folded up with bedding on it, as you will not have to build out to accommodate the mattress nor will you have an open space between the berth and the inner planking to fall in. These loops should only be long enough to allow the berth to fold up flat. A ¼" shank eye bolt through the front frame, with a gate hook fastened to the inner planking, effectively disposes of the berth when not in use. Six ¼" lanyards are provided to hold bedding in place when folded up.

Two pieces of jack chain of the proper length looped around the pipe frame like an eye splice, with other end to hook plates overhead, will hold it at the proper level if berth is to fold down. Eye bolts, however, as shown in Fig. 3 hooked over hook plates would be neater. F. K. DAVIS, Baltimore, Md.

Heating a Small Cruiser's Cabin.

How to Warm Things Up and Keep Them Warm While Cruising in the Fall, Without Impairing the Ventilation, Which Is Quite as Necessary as the Heat.

THE PRIZE CONTEST—Answers to the Second Question in the July issue.

Hot Coffee, Too.

The Prize Winning Answer.

THE drawings show a method of using a small gasoline or kerosene stove in such a manner that ventilation is not interfered with and at the same time all possible foul odors are eliminated. Standard two or three-inch sheet iron piping and elbows are used, while the stove enclosing portion is a short job for a tinsmith. A sliding door provided with a small mica window is fitted to the body portion.

The piping is led out through the cabin wall to fresh air just below the stove. Instead of return bends the upper portion may be carried around the interior of the cabin to suit owner's convenience. The portions of piping which project through the roof should be galvanized. By modifying the body portion to suit the stove used, ready means may be provided for preparing coffee.

J. T. CAVANAGH, Providence, R. I.

Air Must Be Kept Moving.

IN any practical heating system the admission of plenty of fresh air is one of the first requirements. Not only does fresh air play a most important part in the maintenance of good health among the crew, but the heater itself demands a constantly renewed supply of oxygen and refuses to do its duty if this element is denied it.

The cowl ventilator is an efficient means of gathering fresh air and delivering it below, where desired. Of course, windows, screw-ports, hatches, skylights and companionways may be used whenever the state of the weather permits, and a dummy stack is an excellent means of ventilation in rough weather. Care should be taken to induce a circulation of air below, provision being made to admit pure air forward and at the same time to allow the impure air to escape aft in a constant current. From the bow toward the stern is the natural direction of the air current on any boat.

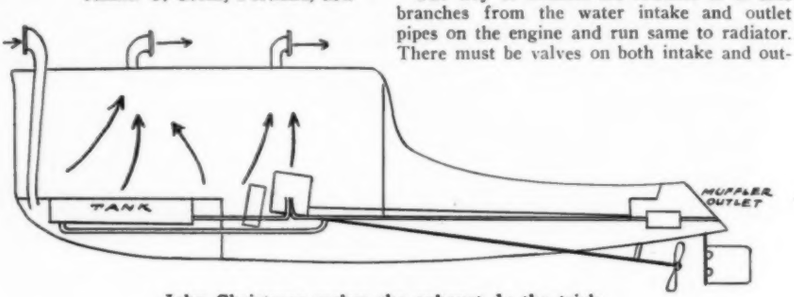
Should the motor be located in the boat's cabin there should be no difficulty in keeping warm below decks while under way, since any engine is an excellent radiator. With an engine installed in the cockpit the circulating water from the water jacket may easily be piped through a coil of pipe or a small radiator in the cabin before being discharged overboard. This hot water heating will be found ample for all usual requirements.

The cooking stove, particularly if it be a Shipmate, will keep the cabin warm enough while at anchor even in very cool weather. Or a kerosene heater may be employed, and if this is kept scrupulously clean no disagreeable odor will be noticed.

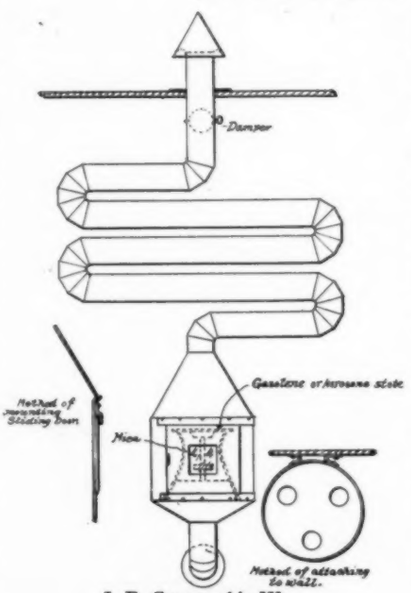
Of course judgment must be used regarding the amount of ventilation allowed in very severe weather. This will naturally affect the temperature below, and with the heating methods mentioned above, it is not, of course, possible to heat "all outdoors," when the thermometer is hovering around the freezing point.

On large boats special steam or hot water systems are frequently installed, but for cruisers up to 35 or 40 feet in length, the methods here suggested will be about all that the average owner will care for or care to pay for.

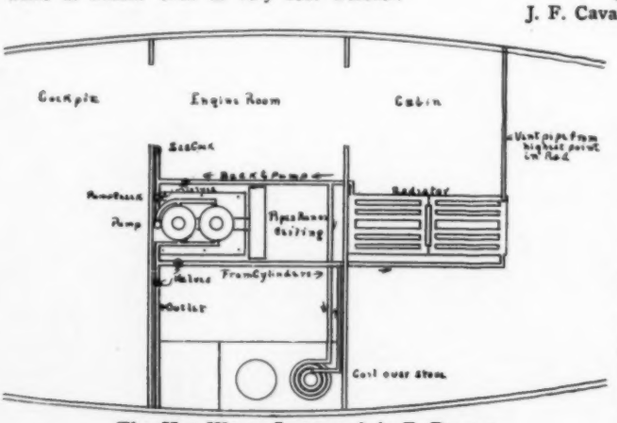
ALLAN O. GOOLD, Portland, Me.



John Christmas makes the exhaust do the trick.



J. F. Cavanagh's Way.



The Hot Water System of A. F. Powers.

Somewhat Elaborate.

FOR heating the cabin of a small cruiser I would suggest a hot water system, this being the most practicable, comfortable and economical. The water circulating system of the engine should be connected to a radiator or a coil in the cabin, which will act in the same way as an automobile radiator, the running engine heating the water as it is pumped through the cylinders and the radiators giving off the heat as the water passes through on its way back to the engine.

A couple of sections of cast iron wall radiators are usually sufficient to heat an ordinary cabin. A brass or copper pipe coil or a couple of second-hand automobile radiators would make excellent heaters, but would be much more expensive than the cast iron radiators.

One lineal foot of one-inch pipe will heat ten cubic feet of space in cabin, while one square foot of surface on the wall radiator will heat thirty cubic feet.

The way to connect the radiator is to take branches from the water intake and outlet pipes on the engine and run same to radiator. There must be valves on both intake and outlet pipes outside of the branches; also valves on the branches. A small vent pipe should be carried overboard from the highest point in the radiator.

To start heat in the radiator it is first necessary to pump it full of water by closing the valve on the outlet from engine and opening valve on that branch. When the radiator is full, the valve on the intake should be closed and the valve on that branch opened. The water will then circulate in the radiator and quickly become hot. The vent pipe will take care of any expansion and overflow due to same. If the water boils, cold water should be injected in the radiator by partly opening the intake valve or seacock.

Thus, when the engine is running, the cabin will be heated by hot water without one cent of expense for fuel.

When heat is wanted with the engine not running, a small copper coil connected into the pipes leading to the radiator and placed over an alcohol or blue flame kerosene stove with a fairly large burner will keep up the circulation of hot water.

Drip cocks should be placed in all pipes and care should be taken that the pipes are run to drain thoroughly.

It is best to use half-inch brass pipe for all water connections, but galvanized iron will answer the purpose, and is much cheaper.

The radiator shown in the drawing is piped to hang on the ceiling, but if headroom is limited, the radiator can be placed on the bulkhead or on one side of the cabin.

This scheme is now heating the office of a small factory where they only have a four h.p. engine.

A. F. POWERS, Lunenburg, N. S.

Utilizes Exhaust.

FOR heating, the exhaust furnishes plenty of heat. Heat from it costs nothing while running idle. As close as possible the motor running idle. As close as possible to the exhaust in the regular exhaust piping insert a 45° T or a Y, then two cocks. Out of the heaviest galvanized iron make one or more shallow boxes to fit conveniently under the floor (preferably) or under the seats. They

should aggregate from eight to ten times the cylinder volume, and have baffle plates. They must be flat to give plenty of radiation. Protect the woodwork by covering them with thick asbestos. Pipe one arm of the L to this or these boxes. As the boxes are at the floor the heated air rises to the roof and thus causes ventilation, and no fumes or gases interfere with the ventilation, as with a stove. The diagram makes plain this system. By the system of cocks, all or part or none of the exhaust may be turned into the heater, giving a nice regulation. The tank part of the bilge should be separated from the rest of the bilge. The forward cowl insures pure air. The tank should not be over 3 or 4 inches deep. JOHN CHRISTMAS, Pittsburg, Pa.

Burlap Screens and Sheet Iron.

THIS is how we heated the cabin of a small cruiser very comfortably for week-end trips last fall, and still kept it filled with plenty of good fresh air. A frame, made to fit the door of the companionway, was covered with a coarse burlap. More burlap was tacked over the inside ends of the ventilators. In this way the cold drafts were shut out, but owing to the coarse weave of the burlap, a good circulation of fresh air was obtained throughout the cabin when the sliding hatch was pulled over and the burlap screen door closed.

The cabin lamps, of which there were two, did not give us enough heat, so this scheme was devised. We obtained a piece of sheet iron, not very heavy, and just the length of the stove, a two-burner alcohol one. This was suspended by wires over the flames with the back side resting on the rear of the stove. In a short time the iron would warm up and throw out enough heat to keep the cabin as warm as was wanted, even in quite cold weather.

Surely this was a simple and inexpensive heating and ventilating system. It caused a laugh from some of our friends, but they did not appreciate its many good points as we did.

F. M. COMEE, Cambridge, Mass.

How to Prevent Carbon Deposits.

What is the Best Method of Keeping the Cylinder Walls and Valves Free of "Carbon" Deposits? A Peculiar Agreement in the Prescription with Different Ways of "Taking" It.

THE PRIZE CONTEST—Answers to the Third Question in the July issue.

Prevention the Best Cure.

The Prize Winning Answer.

THE best method for keeping cylinder walls free from carbon is to prevent its forming in the first place. This is not at all difficult if the matter is handled in an intelligent manner. Carbonizing is due to incomplete or faulty combustion, which can be immediately detected in the exhaust. A smoky exhaust indicates a formation of carbon. A black smoke indicates that the fuel is not being completely consumed and soot or lamp black is being left as a residue. This residue becomes saturated with lubricating oil and chars, leaving the familiar carbon that causes the trouble. Again, if an excess of lubricating oil is used, it will be indicated by a gray or blue smoke. This accumulated oil is not vaporized nor is it capable of vaporization at the compression obtained or by the means by which it is injected. If the mixture is right or nearly so it is carbonized by the gas flame. If an excess of oil and an excess of gasoline both exist, conditions are naturally worse, and of course if the carbon in the fuel and lubricating oil cannot be burned clearly on each and every stroke, there is no hope of burning the accumulated deposit.

Cut your cylinder lubrication to the lowest possible point that will prevent heating. Keep your oil level at or below the lowest center of the crankshaft (crankpins). At the first sign of smoke in exhaust get to work and find the cause and eliminate it, just as you would ignition trouble.

Last, but not least, get good lubricating oil.

F. K. DAVIS, Baltimore, Md.

Cause First, Remedy Afterward.

DEPOSITS of carbon on cylinder head, walls and piston head are caused primarily by an excessive amount of oil getting by the piston up into the explosion chamber. There part of it is burned and passes out of the exhaust, while the rest remains behind and is deposited in the explosion chamber. An excess of oil above the piston may be the result of several conditions, and the carbonization may be aggravated by the use of a poor grade of oil and also by the soot deposited by an over-rich carburetor mixture combining with the surplus oil and burning hard.

Do not worry about a certain amount of carbon in a new engine. Rather expect it, for it is a good policy to feed more oil than may be absolutely necessary until the piston rings and engine bearings have worn in and ceased to show any tendency to heat. This extra oil insures against scored cylinders and burned bearings. This wearing process will take longer in some engines than in others, depending on the accuracy of finish and adjustment. When the engine has worn in properly cut down the amount of oil until only a faint blue haze is seen at the exhaust.

The presence of new rings in an old engine will cause the oil to pump up by the piston until they have become worn in. This is due to their failure to exactly conform to the cylinder walls, and in a rebuilt engine, where the piston rings have not been pinned in place, this pumping will keep up until the rings have found their old bearing. Once in a while a new engine gets out with piston rings under size: suspect this trouble last of all, and test carefully with calipers.

An oversized carburetor will produce carbon, particularly where the intake pipes are large in diameter, as the suction is reduced with this kind of an outfit and the gasoline reaches the cylinder practically in a liquid state, unvaporized, and the soot left behind takes up with the oil as stated above. With an oversized carburetor the mixture is uniformly too rich, owing to the large gasoline nozzle and the impossibility of making the proper adjustment with the needle valve.

Pre-ignition may be induced by slight irregularities in the casting rising above the piston head or cylinder walls. The carbon gathers on these high spots which readily become incandescent and fire the charge on compression. Cut off these high spots with a cold chisel and dress down smooth.

Where an engine is carbonized more than it should be, take it down and examine it for faults above described and make the corrections necessary. Then fill up the oilers with the best oil the market affords and properly set them, carefully adjust the carburetor, and the troubles should be at an end.

Patent carbon removers remove only the results; therefore, do not depend on them, but locate the cause of the trouble and remove it.

BENJ. A. WRIGHT, Newport, Ky.

Mix Oil with Gasoline.

THROUGH varied experience I find the most effective system is to lubricate through the gasoline and cut out all the lubricators. Of course, the very best grade of oil must be used.

The formula for this is to use a pint of cylinder oil to five gallons of gasoline. In two-cycle motors it will also serve to oil the connecting rod bearings, but in the four-cycle motor only the cylinder walls can be oiled.

I have oiled my engines—both two and four-cycle—this way for the past two years, and never have carbon troubles.

"ANONYMOUS."

Ordinary Kerosene Best.

BEFORE considering the methods of carbon removal we will take it for granted that the operator uses a good grade of lubricating oil in the proper proportions, and feeds the right mixture through his carburetor. With a little care in this respect the task will be greatly lightened.

There are several satisfactory ways of keeping the cylinders free from carbon. First we will consider methods which, while doing the work, are easily carried out. These are by using one of the widely advertised prepared liquid carbon removers, or ordinary kerosene oil. The latter is about as good and far cheaper. The proper way to employ it is to take four or five ounces of ordinary kerosene oil, and before stopping the motor for the night place the reverse gear on neutral and feed the oil slowly through the air intake of the carburetor, gradually speeding the engine up, then shutting it off so as to allow the remainder of the kerosene to be drawn in by the motion of the pistons. This thoroughly washes the walls, valves, spark plugs and rings, leaving a sufficient quantity in the cylinder over night to loosen up the carbon.

The prepared carbon removers may be used in the same manner. If it is not convenient to use the above method we may take one ounce of kerosene for each cylinder and pour it through the pet cocks or spark plug openings. This method, however, is less thorough because the cylinders are not evenly covered with the liquid and therefore not so well cleaned. When starting motor in the morning after having used either of the above methods, the reverse gear should be left on neutral, the supply of lubricating oil liberally increased, and the engine allowed to run free for a few moments. This should be done because the kerosene takes the oil off between the cylinder walls and pistons, also thins the oil in the base. To get satisfactory results we should employ one of the above methods once or twice a week, according to the amount of use given the motor.

A very good mechanical cleanser has been put on the market in the form of a chain. This is introduced into the cylinder and a little coal oil poured in, the plug wire disconnected and the motor allowed to run for two minutes. The chain is then extracted with a hook which comes with the outfit, and the operation repeated until all the cylinders have been cleaned.

It is hardly necessary to mention the scrapers which in various shapes are well known to most motor operators. These are introduced through a valve plug opening, the piston placed at top of stroke, and the inside of the cylinder scraped clean.

E. J. F. WILLIAMS, Brookville, Ontario.

The Motor Boat Garage.

Suggestions for the Interior Arrangement and Equipment of the Building for the Motor Boat. The Construction of Slips and Lifting Appliances for Hauling Out and Repairing.

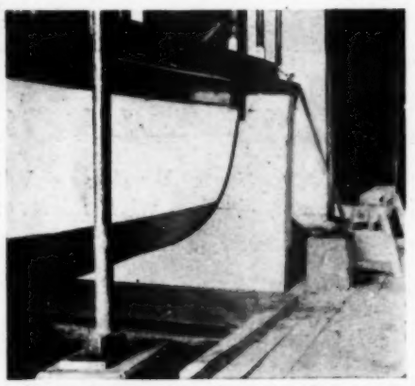
By Harold Whiting Slauson.

AS the land garage should be provided with facilities for repairing the automobile, as well as storing it, so should the motor boat garage be arranged not only to protect the craft, but to care for it and keep it in condition as well. This does not mean, of course, that every boat house should resemble a shipyard on a miniature scale, nor does it involve any great expense in the construction, for the proper arrangement is more a matter of design and equipment than of material and labor. The boat house in which the craft cannot be stored for the winter, in which there is no provision for raising the stern in order that a wheel may be exchanged, and one that is not equipped for making simple repairs to the motor and hull, serves only half of its purpose, and is hardly more useful than is a canvas shelter that acts equally well to keep out the rain. The proper arrangement and equipment require floor space, and consequently the boat house that is "all slip" cannot well play the part of a garage.

Not only should there be plenty of space between the slips, but there should be room at the ends for a small work-bench and whatever tools are provided that do not belong in the boat. This location at the shore side of the boat house between the slips is the best, as it brings the work-bench and tools within easy reach of any of the craft that may require attention. If an extensive repair department is to be maintained in connection with the boat house, an overhead track running from one of the slips to the work-bench or the machine tools will be found useful. A small traveling pulley may be mounted on this track and used to carry heavy parts of the motor from the boat to the work-bench, lathe, drill-press, or whatever tool will be needed. Such an attachment, however, will be found only in the more elaborate boat houses, and it is not probable that the smaller motor boat garage will be equipped with the necessary tools for making the large machine repairs to the motor.

A comparatively small boathouse may have two slips.

The work-bench with a large vise and a few special tools is an absolute necessity, however, and from the time the boat is prepared for the water in the spring until it is laid up for the winter, this end of the boat house will be



Lifting screws and bilge blocks are best for the larger craft.

a valuable and busy department. It has been said that, although a boat may be built and finished, it is never completed, for the interested owner can always find some change he would like to make or a new attachment he desires to install, and although the craft may be in perfect condition, it may be "tinkered with" throughout a good part of the season.

Much of the repairs necessary on a boat throughout the season may consist of healing the scratches, bumps and bruises with which the outside planking of the hull may be covered. Even fenders cannot always prevent these bad knocks while making landings in a heavy sea, but many of the bruises may be obtained while the craft is riding, supposedly serene, in her slip in the boat house. If the water is high or the floor of the boat house low, so that the gunwale of the boat is well above the edge of the slip, the latter should be lined with some kind of buffer to protect the sides of the hull. Old fenders and life preservers serve this purpose well, but if the boat is small, the edges of the slip may be lined with strips of old garden hose that will be found to form an inexoensive and effective protection for the hull. This form of bumper, however, will be ineffective if the water is so low or the boat so small that the gunwale of the latter rests below the edge of the slip. In this case, a projecting edge of the flooring or supporting timbers may cause serious damage, even though the boat enters the slip safely. As the passengers are alighting, the gunwale may become caught under the projection and held there by the increased buoyancy of the boat. Then, if anyone steps in from the other side of the slip, the water acts as a fulcrum, the boat is unable to accommodate its position to the shifted weight, and a great strain is brought to bear upon it.

To many persons the above-mentioned accident may seem highly improbable, but it has happened so frequently to light boats that it serves to furnish additional evidence of the various precautions that need to be considered when constructing a well-designed and properly-equipped boat house. All accidents of this nature could be prevented if the sides of the slip were lined with planks the lower ends of which project well down below the surface of the water. The upper ends of these planks should be level with the floor boards, and as they may be nailed to the string-pieces forming the edges of the slip, a smooth siding will be obtained that will eliminate all projections on which the boat might become caught.

The arrangement of the front doors that guard the enrtance to the slip is another problem that, while not particularly serious, nevertheless may be somewhat difficult of the proper solution. The simplest forms are those that are mounted on hinges and swing open against the side of the building. These cannot well open inward, however, without swinging over the front of the slip and thus unnecessarily restricting the size of boat that may be accommodated therein. Doors that swing outward, while not occupying valuable space, will be found exceedingly difficult to open and close when the wind blows strongly toward the front of the boat house. Unless provision is made for holding one of these doors open, one or both of them may acquire the annoying habit of blowing shut just as the boat is about to enter the slip, and it will then require all the skill of a contortionist and engineer combined to remove this barrier and manipulate the craft at the same time. If the doors swing over outside docks, hooks or bolts may, of course, be used to keep them open, but otherwise each door may best be secured by means of a rope attached to its outer corner and passing through a hole in the side of the boat house. This rope will also be found useful for opening the door against a heavy wind.

The best doors are those that are hung from an iron track and slide apart to each side of the slip. These are easily opened and closed, regardless of the direction of the wind, and they require no valuable space over the outside docks or slip. They do require wall space at either side of the slip, however, and if the boat house is small or has a steep roof with low eaves, there may not be sufficient room for the doors to slide as far as necessary, in this case a door that slides upward will prove a good substitute if there is sufficient room above the slip entrance, but it will need

A small boat may be raised by a differential pulley.

to be counterbalanced with a weight in order that it may be operated easily. If the boat is a small one and is kept in a lean-to adjoining the main boat house, it is probable that there will not be sufficient room for sliding doors of either type. The entrance to such a slip may be guarded by a door that is hinged at the top and swings inward and upward. It may be opened by means of a rope passing over a pullley screwed into one of the rafters, and such a door will be found to overcome many of the objections connected with the type that swings through a horizontal, instead of a vertical, arc.

It is as the winter store house for the craft that the motor boat garage will prove itself the greatest money-saver, as the charges for "hauling-out" space are often excessive. If the boat is to be kept in a building, one dollar per foot of length is about the cheapest for which space in a public "garage" may be hired. If the boat is hauled up on shore, a covering must be built over her cockpit or cabin, and the expense of this, combined with that of the construction of the ways and blocking, will amount to an annual item that would soon total the cost of the proper equipment of the boat house.

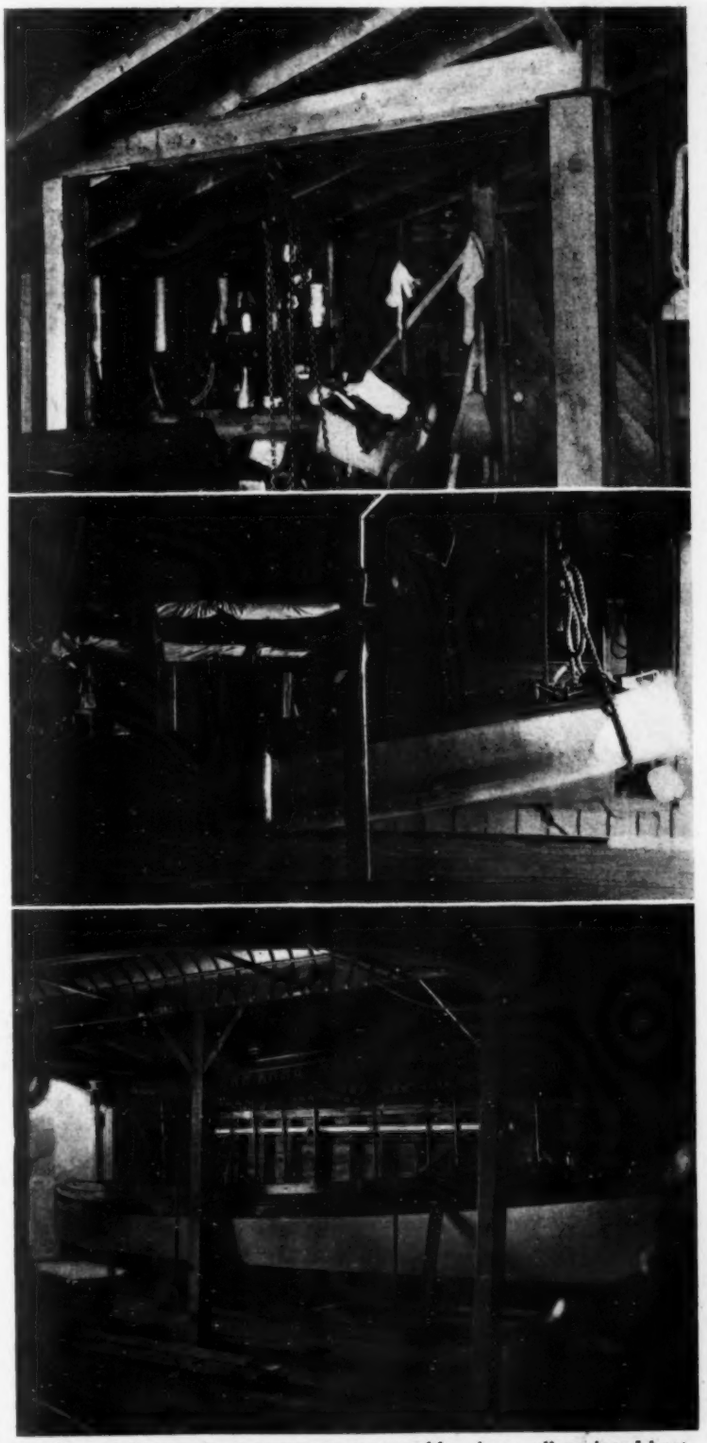
A slip large enough to accommodate a boat weighing over one or two tons should be provided with a lifting appliance at the time that the piers are laid. This generally consists of two or three sets of screws, each of which is attached to the end of a heavy cross-timber that normally rests at the bottom of the slip. The cross-timber forms the bottom of a "U," while the two screws, which are in reality threaded rods, constitute the sides. The upper ends of these rods project through the floor on opposite sides of the slip and the arrangement is raised or lowered by turning two nuts, one of which surrounds each screw and rests on a plate secured to the floor at the point where each rod pierces the planking. Each nut may be turned by means of a long-handled wrench, the end of which has been forged to the proper size and shape, and if the two rods of each set are raised together, it will be seen that the cross-timber will be lifted uniformly—slowly, to be sure—but with sufficient power to carry with it the heaviest boat that could enter the slip. The rods should be threaded throughout a sufficient distance of their length so that the timber may be raised well above the surface of high water.

As the handle of the wrench will be too long to enable it to make a complete turn without striking the boat, a ratchet is a convenient attachment to use in connection with the nut. These ratchet nuts will operate in either direction, and the screws may then be raised or lowered without the necessity of removing the wrench at the end of each partial turn. The floor should be supported by extra piers or additional timbers at the points from which the cross-pieces are suspended, as it is these four or six places that bear the entire weight of the boat during the winter when she is raised out of the water.

Whether two or three sets of cross-timbers and screws will be needed depends upon the size and weight of the boat and the location of the motor. The portion of the keel nearly under the motor should rest on one of these supporting timbers, and consequently three sets of screws and cross-pieces will probably be needed if the power plant of the craft is located amidships. As an additional part of the winter-storage equipment, two bilge blocks should be made that will conform in curvature to the shape of the hull at the point over the central or stern cross-timber. These bilge blocks may be built up from heavy timbers cut to shape from the original patterns or plans of the boat, and thus the hull may be kept rigidly on an even keel with no undue strain concentrated at any one point.

One cross-timber and set of screws may be used for raising the stern out of the water for the purpose of repairing the rudder or replacing the wheel, and thus the hoisting apparatus will serve a double purpose. But there is a considerable amount of labor involved in raising the stern of the boat for a short time in this manner, and in the case of a medium-sized boat—one under five tons, say—a worm or differential pulley would save both time and energy. The last-named of these is the cheaper, and as it can be obtained in sizes capable of lifting from two to five tons, it forms an exceedingly useful boat house accessory. The differential pulley is sometimes known as an "endless chain," because the one continuous chain passes around the two grooves of the upper block and also around the lower pulley. The upper block is cast in one piece and is similar to two pulleys, one slightly smaller than the other, coupled together and mounted on the same bearing. It is this difference in size of the two pulleys of the upper block that constitutes the differential principle upon which the tackle operates.

By attaching the pulley to a stout support overhead and hooking the lower block into a rope slung under the stern of the hull, this portion of the boat may be raised quickly and easily, and as the tackle is self-locking in both directions, one man may perform the entire job. If the boat is other than a light runabout, special preparations will need to be made to furnish a support to which the tackle may be attached, as the rafters or joists of the floor above would not be found sufficiently strong. If their is a floor overhead, one of the rafters may be reinforced by a couple of uprights and used as a support for the pulley. These uprights would probably be in the way when the pulley is not in use, however, and in order to occupy as little valuable space as possible, some form of collapsible or removable supporting framework is preferable. One of the best supports to which the pulley may be attached is formed by a heavy "six-by-six" cross-timber, which may be fastened to the overhead floor beams or rafters in any convenient manner. This cross-piece must, of course, set level, and if it is attached to a sloping rafter, it must be suspended at one end from the higher portion of the roof. A few spikes and short pieces of "two-by-fours" will serve to hold the cross-timber in place, and the construction need not be particularly substantial as the rafters have to bear but the weight of the material. A heavy eye-bolt should pass through the center of the timber directly over the slip and should be held se-



Hauling out for repairs presents no great problem in a well equipped boat-house. These photographs show how easily it may be done in a small space.

curely in place by a large nut and washer on the upper end. This forms a well-anchored ring into which the upper block of the tackle may be hooked.

When the cross-timber is in use, the weight of the boat raised by the tackle is carried on the two uprights. These uprights should also be "six-by-sixes" and should be cut to such a length that one will fit under each end of the cross-timber between it and the floor.

Thus the uprights will support the entire weight of whatever is lifted by the pulley, and yet they may be removed easily when not in use and stored in any convenient out-of-the-way place in the boat house. With a cross-timber over each end of the slip and both placed at the same height above the floor so that the one set of uprights may be made interchangeable, either the bow or stern of the boat may be raised. The addition of another set of uprights will enable both cross-timbers to be used at once, and if a second pulley is obtained, the entire boat may be raised out of the water. If the boat is only of medium size, this method may be used in lieu of the screws for laying the craft up for the winter. In this case, after the boat has been raised above the floor, three heavy timbers should be placed across the slip. These will form a substantial support on which the craft may rest, but care should be taken to make certain that the weight is distributed equally on all three timbers.

If the motor boat garage is to serve the same purpose for the water vehicle that its land cousin does for the automobile, the building must be provided with sufficient room for the storage of spare parts and accessories and should include equipment for the accommodation of a generous reserve supply of fuel and oil. Inasmuch as the ordinary motor boat is supplied with a large amount of removable equipment, such as tops, curtains, spray hoods, chairs, seat cushions, life preservers, and the like, which are not included in the category of automobile necessities the water garage should be provided with plenty of space. If the building contains a loft, this may be used to good advantage as a store-room for some of the larger pieces. No matter how conveniently located may be the stairs that lead to the loft, a trap-door cut in the floor over the side of the slip will be found of great value, as by means of it, bulky equipment such as tops and chairs may be hauled directly up to the store-room, and are readily accessible when wanted.

If the boat house has been built without a loft, the sides may be utilized for hanging flat articles, and on account of the variety of equipment that may be used in even one small boat, many garages resemble a nautical curiosity shop. By means of pulleys attached to the rafters and ridge-pole of the roof, many of the more bulky articles may be stored in a portion of the building otherwise unoccupied and useless. Removable canopy tops may be stored in this manner, and as such equipment is usually comparatively light, the rafters will not need to be reinforced in order to sustain the extra weight.

The solution of the problem of fuel storage depends upon the nature of the fire insurance policy covering the building and contents. Notwithstanding the fact that gasoline can be stored in large quantities with perfect safety in almost any building, some regulations require the fuel to be kept in a tank either buried in the ground or located at a given distance from the boat house. With the storage systems now in use, the tank may be submerged a few feet in the water and connected by a pipe to a pump located near the slip in the boat house. If it is desired to place the tank on land, however, it should be located near the water's edge so that it may be filled easily. Tank boats at many of the summer resorts and "watering places" now deliver gasoline in almost any quantity directly to the boat house. The boats are equipped with pumps by means of which the fuel may be forced into the storage tank or boat, and for this reason it is advisable that the former should be located within easy reach of the dock at which the supply boat would land.

The average motor boat is capable of rendering such long and efficient service to its owner that the best home is none too good for it, but proper arrangement and equipment of its quarters will count for far more than will elaborate design and fine finish. Consequently, while the proper housing of the boat is of the utmost importance, it need not represent an outlay large enough to deter the enthusiast from the purchase of a motor craft, for, with the exercise of care and ingenuity, a suitable marine "garage" may be built at comparatively little cost.

What's Wrong With Racing Abroad?

The Stagnation of Motor Boat Racing in England and Elsewhere and Some of the Reasons for It. The Ineffectiveness of Handicapping Methods and Suggestions for Classifications.

APPARENTLY the lack of interest in motor boat racing is causing some concern among enthusiasts upon the other side of the ocean, and in some ways the situation is somewhat analogous to this country.

To say that the sport of marine motoring is on the downward grade would be to take an altogether too pessimistic view of its condition, comments our contemporary, *The Motor Boat* of England, editorially, but at the same time no one who has followed its yearly progress could possibly regard it as prosperous. If motor boat racing has not lost anything in the nature of public interest and support, it certainly has not gained, and its future prospects can best be served by boldly facing an undoubtedly unsatisfactory situation, endeavoring to find its cause and apply the remedy, rather than by affecting a disregard of its existence. It is a firm belief that the matter is not one that will right itself without vigorous effort on the part of all connected with the sport, that leads us to refer to it here.

Motor boat racing depends upon a heterogeneous assemblage of launches, individually good, but incapable collectively of affording good sport simply because there exists, or can exist, no rating rule capable of sufficiently wide application to bring them together. Nor does any system of arbitrary handicapping offer a much more satisfactory solution of the difficulty. Handicappers and committees of the greatest experience and skill have faced the problem, but the number of variable factors in the situation, the state of the sea, the tide, the turning of marks and the fluctuating performances of the boats themselves have made it impossible to insure consistenaly close racing. A really close handicap is the exception rather than the rule, and when the difficulties are considered, it is remarkable that the results are as good as they are.

But the remedy certainly lies with the marine motoring clubs of this country. If racing is to become really popular, its mainstay must be restricted classes, and their formation should occupy the attention of all concerned during the rest of the summer. One-design classes do not meet the case. Whatever their sporting possibilities, experience has revealed three weak points. Owners do not care to be tied rigidly to all details of their boats and equipments, such classes do nothing whatever to "improve the breed," and from a trading point of view they are undesirable. It is, we repeat, to restricted classes that we must turn, and the crux of the problem lies in the choice of a range of classes offering the necessary scale of cost, speed, and general utility to meet the requirements of all owners. We do not wish to suggest that the boats should be pleasure launches first and racers afterwards, those who race must be content to sacrifice some considerations to sport, and if the sport can be made sufficiently interesting they will certainly do so.

Just what these classes should be is not a question that can be settled here; it is, of course, a matter for racing committees and for consultation with owners and prospective owners of boats. But in such cases it is often convenient to approach the problem by criticism of a definitely formulated scheme, and we venture, therefore, to suggest certain classes in the hope that all interested will criticise not merely the classes themselves but the whole principle of restricted racing. There are many hundreds, even thousands, interested in the sport, and if only a fraction could be induced to give publicity to their ideas on the whole racing question it would materially lighten the work of those who have the framing of next year's programmes.

There must, we suppose, remain the present unrestricted class for the fortunate few who can afford to build to it, retaining the present 50 ft. length limit. The largest restricted class, however, we would limit simply in cylinder capacity, let us say the equivalent of four cylinders 6 in. by 8 in., that is a moderate-stroke grand prix engine. Such a motor should be easily capable of 100 h.p., and the result would be probably a class of skimmers of one type or another capable of 30 to 35 knots. Moreover, to insure a reasonably seaworthy hull we should suggest a minimum length limit of 9 meters or 30 ft., perhaps even 10 meters, for by so doing the boat would necessarily be big enough not to be all engine. A certain amount of space capable of affording comfortable passenger accommodation would thus be automatically provided.

Next might come a four-cylinder 4 in. by 6 in. class or the equivalent, that is to say an engine capable of anything from 25 h.p. to 45 h.p., with a hull of a minimum length of 8 meters, again sufficient to prevent a monopoly of space by the engine. The best boats in the class might attain 30 knots.

Lastly we should like to see a four-cylinder 3 in. by 5 in. class, or the equivalent, capable of about 20 h.p., with a 6½-meter minimum length limit, speed perhaps 19 knots.

Finally, the influence of fashion remains to be considered. The larger and faster classes of motor launches are for rich, or moderately rich, men, who, in the main, follow those pastimes that are fashionable. No effort should be spared to make motor boat racing fashionable, even as golf, motoring, polo and other pastimes are the fashion. There should be no insuperable difficulty in putting forward successfully the claims of motor boat racing to a place in the society functions of the year; indeed, some of its most prominent present supporters could supply just the impetus required. It should be the first aim of the clubs to stimulate the interest in the movement in every possible way.

These three classes would meet the needs of all who take racing sufficiently seriously to build to a class at all. It is, however, fairly obvious that to build with any hope of success would entail the adoption of a "skimming" or "semi-skimming" type of hull which would have the effect of excluding owners desiring an ordinary displacement boat. The difficulty might perhaps be met by the arbitrary formation of an "A" and "B" division of each class, but these and other details would have to be discussed at a later date.

New Motor Boat Designs.

A 50-Foot Auxiliary.

A FIFTY-FOOT boat equipped with both sail and gasoline power, to be used for fishing purposes, has just been designed by C. I. Nielsen, of Gravesend Beach, Brooklyn, N. Y. She is novel in a number of particulars and is well constructed to withstand a great amount of heavy weather which she will be likely to encounter in the district in which she is to be used.

Almost amidships is a well or cockpit which is used for the storage of fish. The total length of this well is 14 feet and this space is divided equally into a fish well proper, for keeping fish alive, and provided with four sea valves for running in a fresh supply of sea water; the other half of this space, seven feet in length and running the full width of the boat is occupied by a fresh water tank in the center and cold storage space upon either side. A hatch gives access to this space.

The remainder of the boat is divided into two cabins, one forward and one aft of the cockpit. The after cabin is the smaller of the two, measuring 15 feet from the extreme point of the stern, where there is located a small self-bailing cockpit with a steering wheel. The after portion is a cabin and engine room combined and is equipped with two transom berths, one on either side, and a bed, the latter of which, with two closets, occupies the full width of the boat. A 25 h.p. Ferro motor is located in the center of this cabin and is covered by a table when not in use. This cabin is entered through a companionway from the central well and has full headroom of 6 feet 6 inches clear. It is lighted by skylights and three portholes upon either side. The portion of the boat forward of the well is fitted to be used as a cabin, dining-room, sleeping quarters when necessary, and additional storage space. Headroom in this space is from 6 feet 6 inches to 6 feet 9 inches. A galley upon the starboard side is arranged very conveniently, and a table is located upon the port side near the two berths. A small closet is provided for the accommodation of the galley utensils, and aft of the galley upon the starboard side is a toilet room. A door opens from the center of this cabin, forward into a small passage connecting with a room upon the starboard side for stores and upon the port side with the icebox for general ship's provision. Forward of this is additional cold storage space for fish, the icebox being furnished with a hatch upon the deck, and in the extreme bow is the fuel tank.

The cabin is lighted, in addition to the skylights, by four portholes upon either side. A mast extends through to the keel, occupying a small portion of the main cabin forward, near the table.

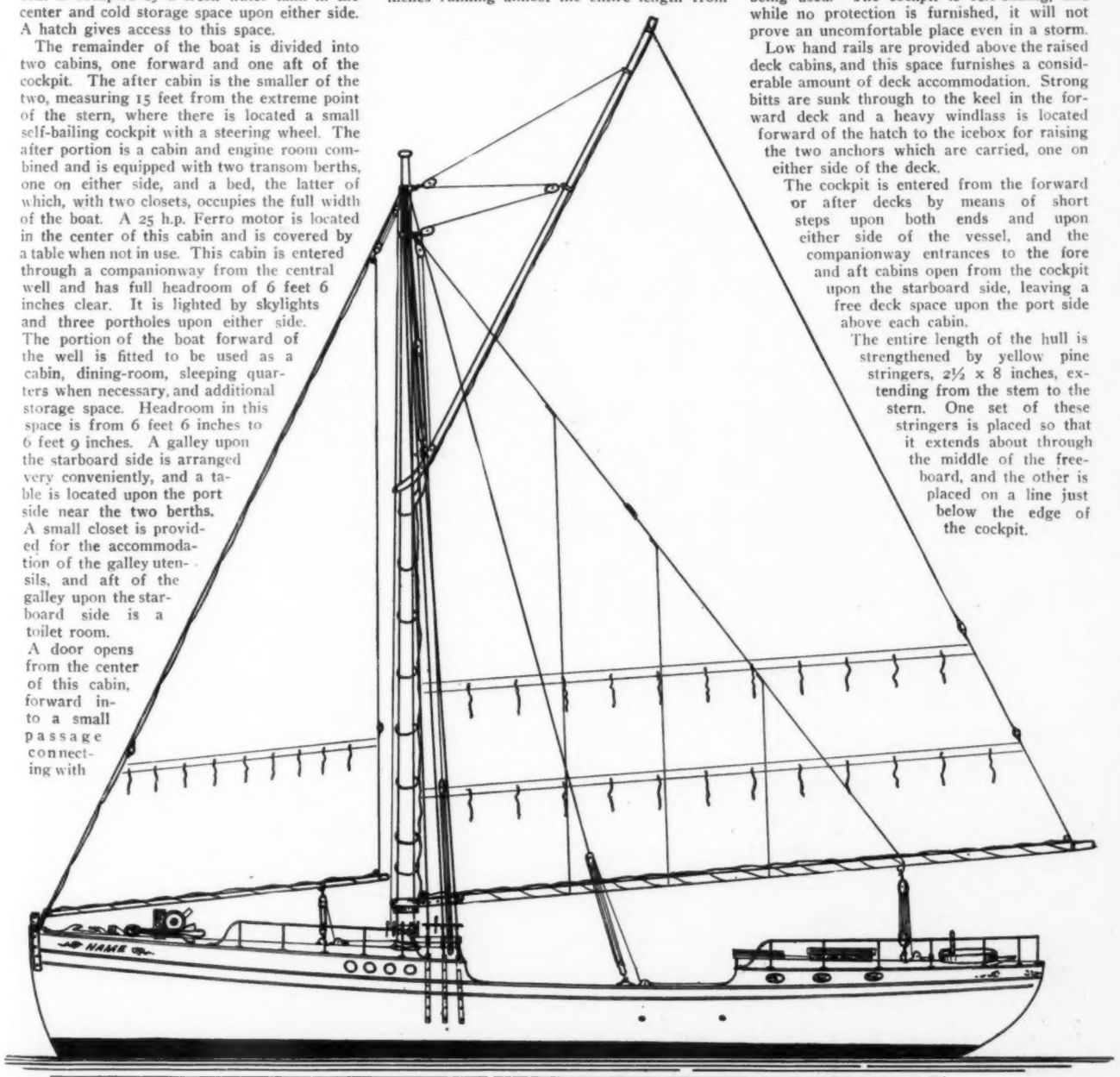
Two watertight bulkheads are provided and the keel is weighted with 3,226 pounds in the form of a cast iron shoe, measuring 4 x 12 inches running almost the entire length from stem to rudder post. This gives the vessel an exceptional amount of stability and she will be able to carry unusual amounts of weight that will not necessarily have to be so carefully balanced. The overhanging stern allows full protection, with the skeg, for the propeller, and the space under the bed berth in the engine room, which is at the point where the keel proper comes to an end, is utilized for storing charts in an accessible position within reach of the steersman.

The after cockpit for the steersman is very small, but is conveniently arranged, being just large enough to accommodate the one man at the helm and so located as to be within reach of the main sheet when the vessel is under sail or of the motor when the auxiliary power is being used. The cockpit is self-bailing, and while no protection is furnished, it will not prove an uncomfortable place even in a storm.

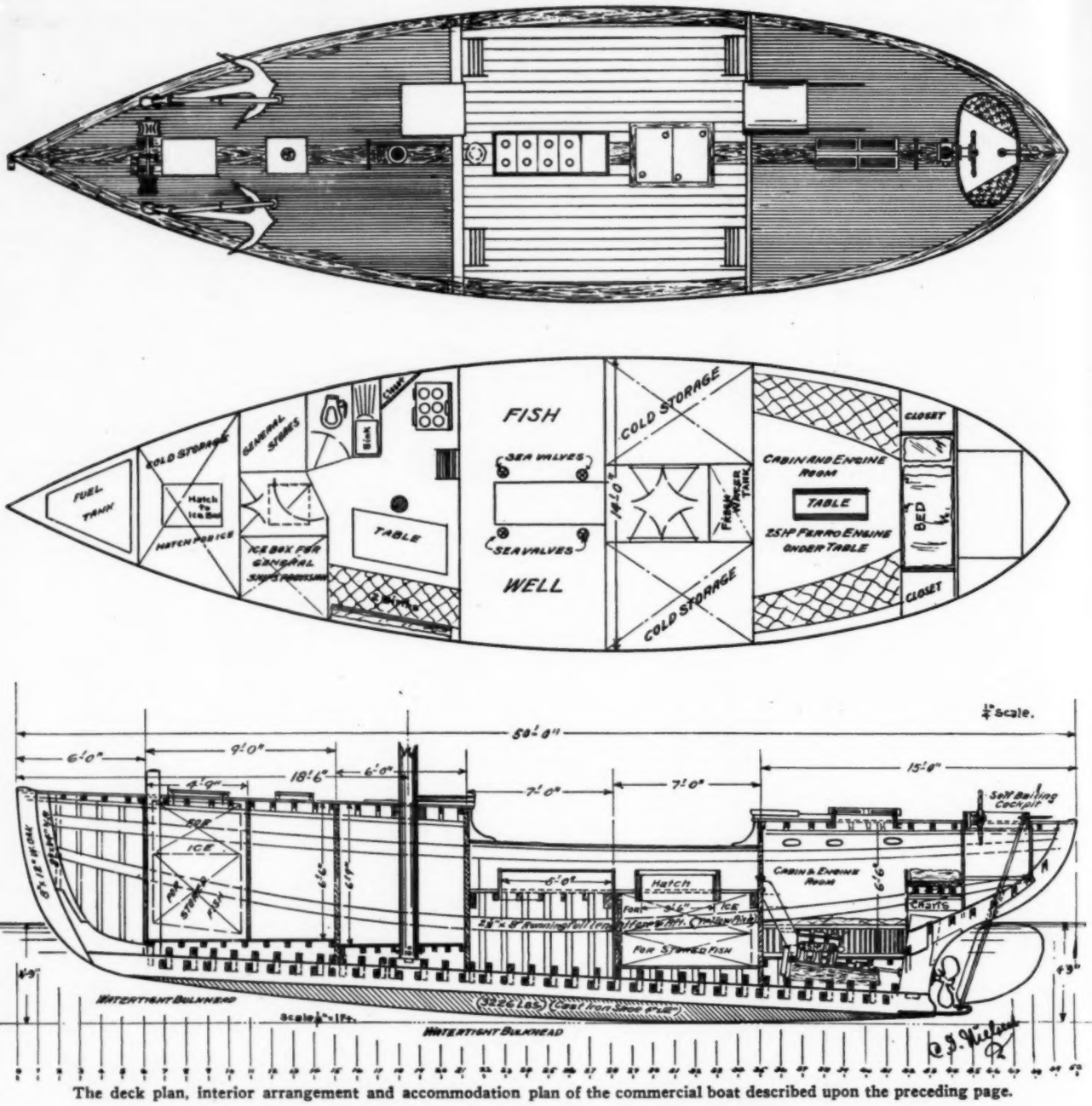
Low hand rails are provided above the raised deck cabins, and this space furnishes a considerable amount of deck accommodation. Strong bitts are sunk through to the keel in the forward deck and a heavy windlass is located forward of the hatch to the icebox for raising the two anchors which are carried, one on either side of the deck.

The cockpit is entered from the forward or after decks by means of short steps upon both ends and upon either side of the vessel, and the companionway entrances to the fore and aft cabins open from the cockpit upon the starboard side, leaving a free deck space upon the port side above each cabin.

The entire length of the hull is strengthened by yellow pine stringers, 2½ x 8 inches, extending from the stem to the stern. One set of these stringers is placed so that it extends about through the middle of the freeboard, and the other is placed on a line just below the edge of the cockpit.



Mr. Nielsen's design provides very comfortable accommodations both fore and aft without interfering with the duties of the vessel as a commercial craft.



The deck plan, interior arrangement and accommodation plan of the commercial boat described upon the preceding page.

A 120-Foot Motor Yacht.

THIS boat, shown upon the following page, has been designed by Messrs. Whittelsey & Whittelsey, of New York, for a local yachtsman, who intends to use her on the New England coast during the summer and in Florida in the winter. The vessel is to be built of steel and the construction is to be substantial and in some parts quite heavy. The design contemplates a thorough seagoing boat, as can be seen from the drawings, and one that has been so conveniently arranged that the owner and his guests can live aboard for a considerable length of time with every possible comfort. The forward dining saloon will be a large space, capable of seating 10 or 12 at the table when it is extended. The service to this dining saloon is from the galley below, which is much larger than usual for boats of this size.

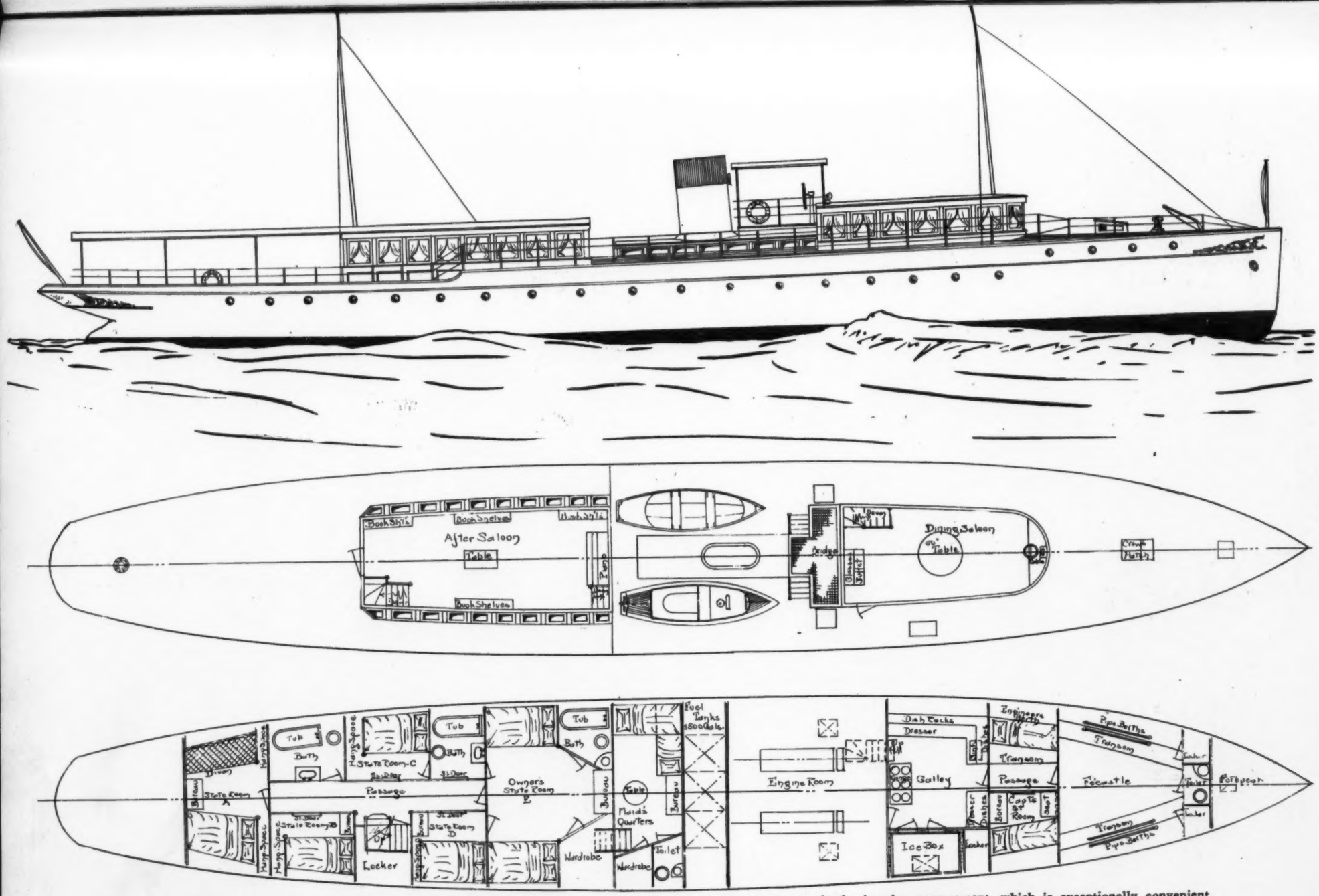
The after house may be used as a library and music room and general lounging place, and will be most comfortable in bad weather. The sleeping quarters for the owner and the guests will be entered from the after saloon and from the layout it can be readily seen that these are all large and well ventilated. The owner's stateroom is similar to that aboard Itasca II, a new large gasoline cruiser just finished from the boards of the same designers. The quarters of this boat not only allow plenty of stateroom space, but she is particularly well fitted with bathrooms.

An unusual feature of this boat and also a very practical one is the location of the special quarters for maids. This space is entered from the further end of the after saloon and by reason of its location it is private and at the same time convenient for service to the ladies of the owner's and guests' quarters.

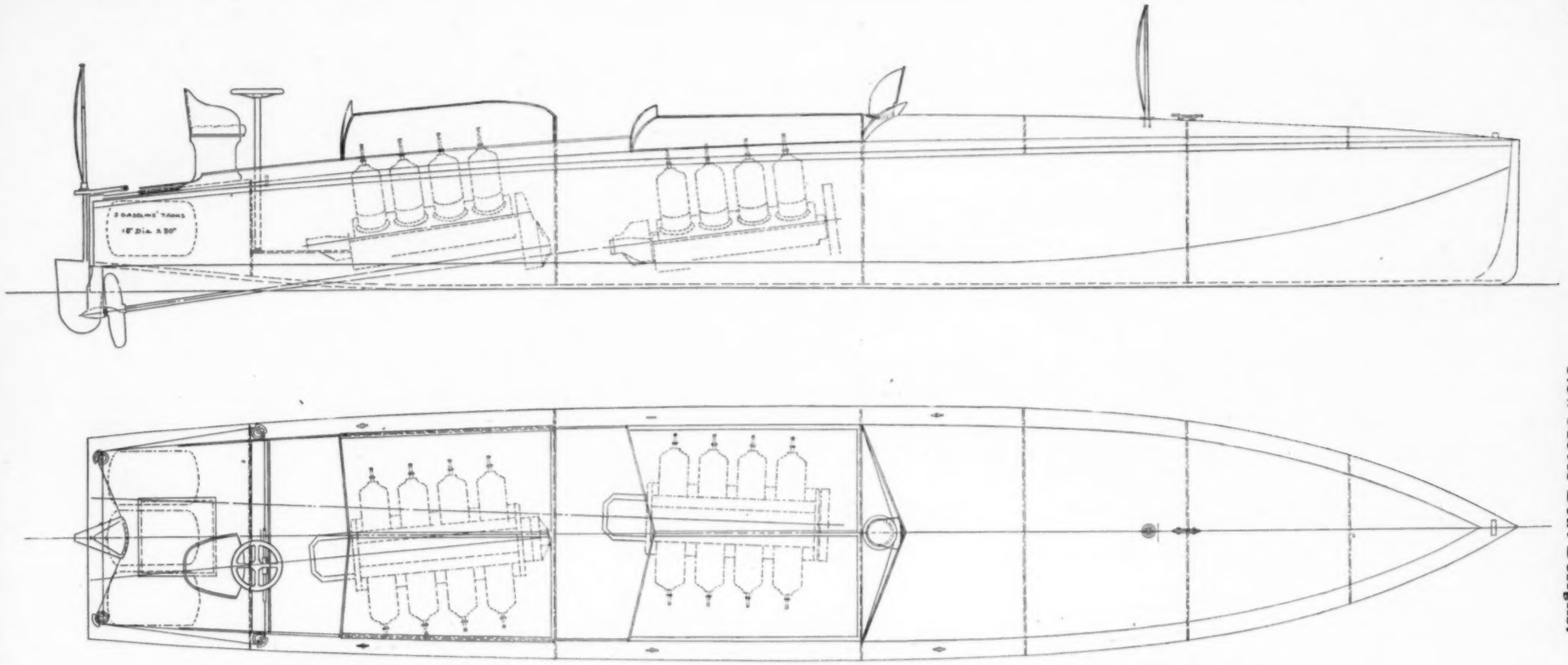
A low and broad stack, placed a trifle forward of amidships, gives an appearance of speed to the craft and also furnishes ventilation for the motor room. Just forward of the stack is the bridge, covered by a removable awning. An awning also extends aft from the rear cabin, and ample deck space is provided in the stern of the vessel. A life boat and a motor tender are carried amidships on either side of the deck above the engine room where they can be quickly put overboard.

The forecastle is entered through a hatch in the forward deck, and an anchor windlass is placed upon the deck just forward of this. Two signal masts are provided and provision is made for the installation of a wireless, the aerials being conducted in the usual manner between these masts.

The gasoline tank compartment is watertight on all sides and tanks of a capacity of 3,000 gallons will be installed. The engine room is ample and in fact will be a large one. The power is to be two 150-horsepower motors, which will give a speed of 15 miles an hour. There will also be an auxiliary electric light plant, motor and generator. The boat will be entirely lighted by electricity and the lights are to take their current from the storage batteries. The designers expect to have this vessel ready for delivery next spring.



The principal feature of the 120-footer by Whittelsey & Whittelsey, which is described upon the preceding page, is the interior arrangement, which is exceptionally convenient.



Dixie IV, equipped with two motors of more than 250 horse power each, is the most highly powered craft of her size in this country.

Dixie, the Fourth and Fastest of Her Name.

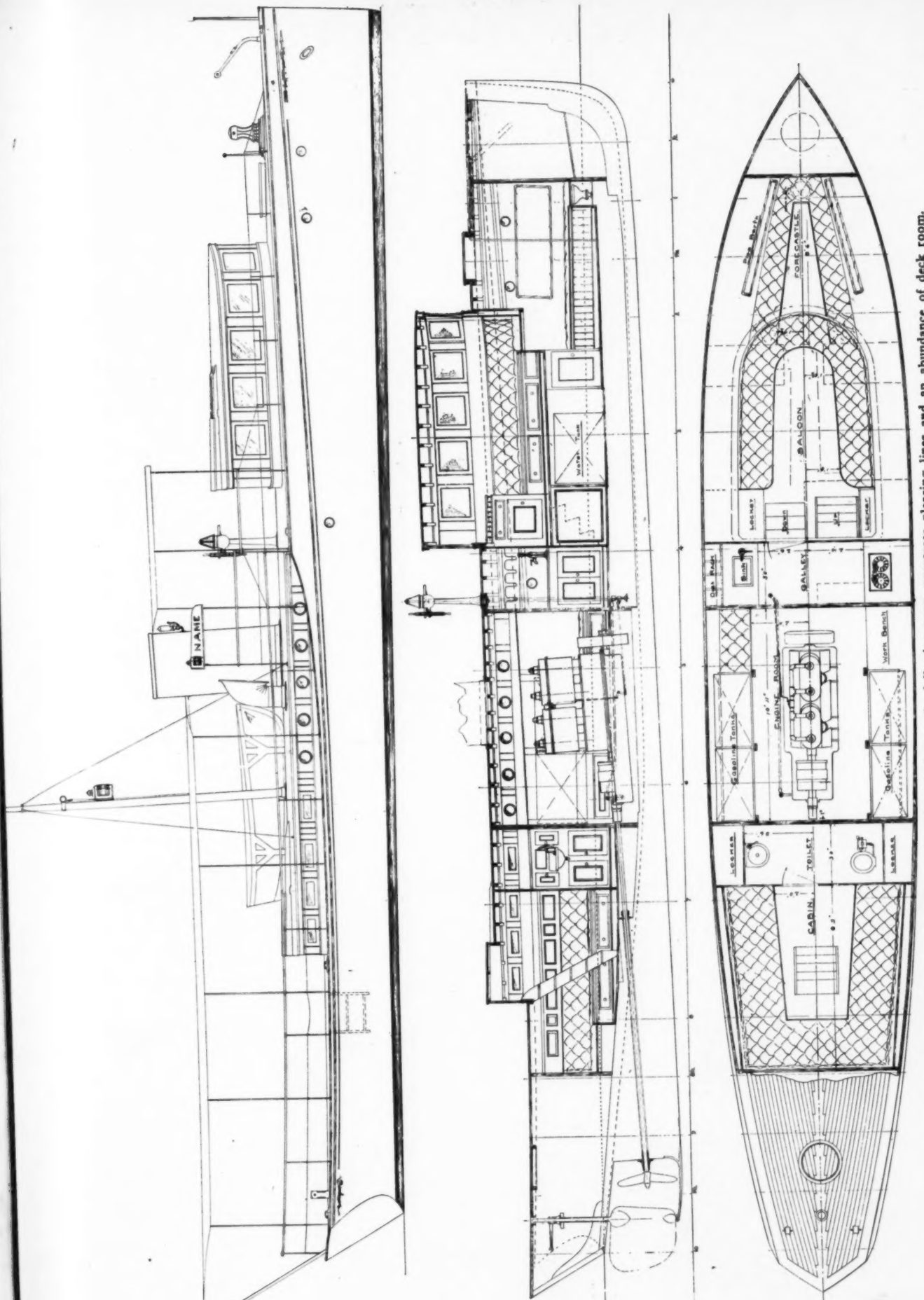
DIXIE IV, whose profile and plans we show above, a craft which has doubtless been the subject of more discussion than any other boat, was designed by Tams, Lemoine & Crane, of New York City, and is owned by a syndicate composed of Frederick S. Burnham, August Heckscher and H. H. Melville, all of New York City. Dixie is 39 feet, 11 inches in length, with a beam of 7 feet, and is equipped with two Carne motors of a trifle more than 250 h.p. each. As the plans show, these motors are installed, one behind the other with a watertight bulkhead separating them. The forward motor is the same one that drove Dixie II and Dixie III to so many victories, and the second motor is a new one, the exact duplicate of the former.

The old motor was ground down a few thousandths of an inch, never having been ground before, and the actual power developed by the two motors, measuring 7¼ x 7¼ inches, is approximately 520 h.p. They are each of eight cylinders, arranged V-type, the forward motor driving the port propeller directly through the clutch, while the after motor drives the starboard propeller through spur gears mounted at the fore and after ends of the motor, and connected direct to the main shaft.

A new type of propeller, the design of Tams, Lemoine & Crane, with four blades and hung from A-type struts are used, and the helmsman sits upon a high seat placed in the extreme after portion of the craft, steering by means of a large horizontal wheel.

Dixie is usually started by turning over the forward motor, which will carry her along at a speed better than 30 m.p.h., and then throwing in the clutch of the after motor, the drag upon the propeller being sufficient to start it.

Much of the design of Dixie was kept a secret until after she had run in her first race upon the St. Lawrence River, but as can be seen from the plans, she is of the hydroplane type, a step being located near the middle of the hull. She has a chine extending her whole length, the line being well below the waterline at the stern, carrying below the water to within about ten feet of the stem where it rises in a sweeping curve. A metal plane is built from a point about 12 feet from the stem and is stopped by the step referred to. A more extended description of Dixie IV will be found in another section of this issue.



The 60-footer designed by Bowes & Mower and described upon the following page, possesses pleasing lines and an abundance of deck room.

A New 60-Footer.

A SIXTY-FOOT cruiser shown upon the preceding page was designed recently by Bowes & Mower, of Boston, and will without doubt be used upon the Great Lakes for a part of the time. She has a beam of 10 feet 6 inches and is of moderate draft, sufficient, however, to give her a considerable amount of stability.

The design shows a flush deck craft as far aft as the bridge, where a trunk cabin begins which is carried back nearly as far as the after end of the cabin. The flush deck forward is partly covered with a deck house, but sufficient space is left upon all sides of this to afford ample deck accommodation in the bow of the craft.

The deck house is comfortably furnished and upholstered in leather. This is also used as a dining-room to which easy access is afforded by stairs from the galley just beneath. Forward of the deck house is a hatch leading to the crew's quarters in the forecastle, which are furnished with both transom and pipe berths on either side.

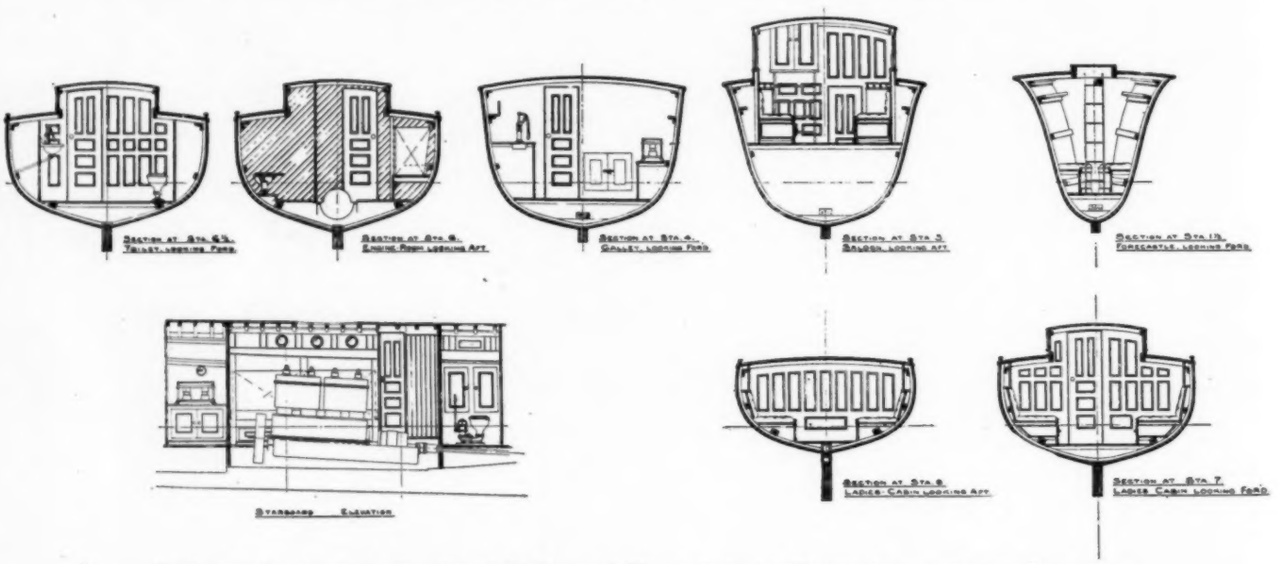
The main cabin and engine room are aft of the galley, the two being separated by a toilet opening into the cabin. The engine room is almost exactly amidships and is equipped with a work bench upon the starboard side. The motor is placed in the center of the room, which is almost 11 feet in length, and the gasoline tanks are located upon either side of the motor. The toilet room occupies the full width of the vessel, with a locker at either side.

The cabin is upholstered in leather upon three sides and furnishes a place for sleeping accommodations if necessary. A companionway opens from this cabin to the after deck, where there is sufficient flush space provided to allow several chairs to be placed.

Just aft of the forward deck house is the bridge, and the motor controls are extended to the wheel so that the boat may be controlled by one man when desired. A stack, which is placed amidships, affords ventilation for the engine room and adds greatly to the appearance of the boat. Additional ventilation is secured by cowls extending through the deck above the engine room.

Large square windows are furnished in the forward deck house, and the motor room is well lighted by portholes upon either side. Four Pullman windows are furnished upon either side of the after cabin and an abundance of light and air can be secured.

A signal mast is placed aft of the stack, and the entire deck as far forward as the fore part of the bridge is covered by a removable awning. A dinghy is carried upon the trunk cabin next the signal mast and is so arranged that it can be rapidly put overboard in an emergency.



Sections and motor room elevation of the Bowes & Mower 60-footer illustrated upon the preceding page.

Ellen, a Comfortable Cruiser.

THE plans shown herewith are of a rather unique type of boat, which was designed this year by Messrs. Tams, Lemoine & Crane and built under their supervision by the Staten Island Shipbuilding Company for Mr. Edmund Randolph, of the N. Y. Yacht Club.

This yacht was designed primarily for day use, as will be seen from her plans, and will be used almost entirely for this purpose, although she has sufficient accommodations for a short cruise. The most notable feature of the boat is a large amidships cockpit, with ample room for comfortable deck chairs. The small forward trunk cabin, which is over the engine space and crew's quarters, together with the wind shield at the forward end of the awning, gives ample protection to the owner and guests in the cockpit against the weather.

She is handsome in appearance, painted black, with white pine decks, and finished in mahogany. Has pine planking over oak frames and is copper fastened. She is heavily constructed and has proved herself to be an unusually good sea boat. Her bow has a good flare.

Her dimensions are 67 feet 10 inches overall, 67 feet 6 inches waterline, 12 feet beam and 3 feet 9 inches draft. She is equipped with two 6-cylinder 60 h.p. Twentieth Century motors, giving her a speed of 15 miles an hour. The engine is situated just forward of amidships, keeping the weight at the greatest point of displacement, and making her unusually steady in rough weather. She has a liberal amount of deck space forward, with a hatch leading into the crew's quarters. Over the engine room there is a large skylight, insuring good ventilation. Below forward is a chain locker, which is separated from the rest of the ship by a watertight steel bulkhead. Aft of this is a large clothes locker for the crew. This is followed by the crew's quarters, in which there are two pipe berths, a transom berth and ample locker space.

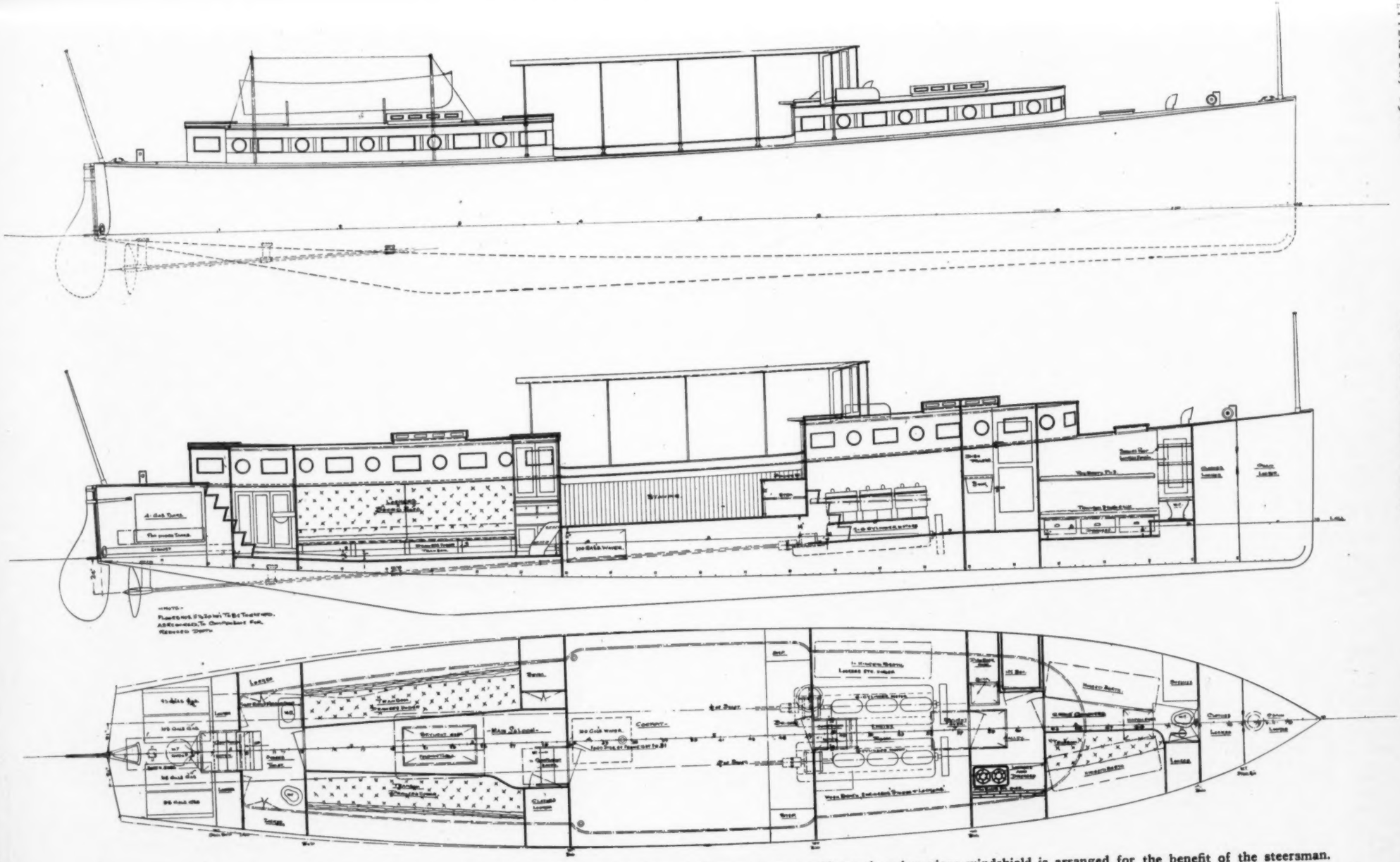
The crew's quarters are followed by the galley, with large ice box, ample dish racks, stove, etc. This compartment is the full width of the ship, and aft of it is the motor room, which is very large. This in turn is followed by the cockpit. Abaft of the cockpit is a main saloon, in which there are two transom seats, which can be made into berths, clothes locker, sideboard, etc. There are large drawers under each of the berths.

Following the after cabin is the owner's toilet room, which is the full width of the ship. Aft of this are the gasoline tanks under the after deck, which are installed in a watertight compartment. They are four in number, built of galvanized plate, 16 gauge; are fitted with swash plates, hand hole plates for cleaning, and all the seams are riveted and soldered. The tanks are connected together; the filling and vent pipes extend to the deck and are watertight. The tanks are set in a copper pan 24 inches deep and carefully scuppered to lead outboard in case of leakage. The piping is of copper.

The hull of the boat is very substantially constructed, much more so than usual in the average modern craft of this style and type. The keel, stem, stern, frame, etc., are of selected white oak with decks of white pine. The deck trimming and cabin house is of mahogany; the shafting of Tobin bronze and her propellers of manganese bronze. These propellers were specially designed for the yacht by Mr. Crane.

She carries a 10-foot dinghy on top of the cabin house, with davits for swinging out and lowering.

The interior is finished in white enamel with mahogany trim.



Ellen, described upon the preceding page, is rather unusual in design. The cockpit is located between the two cabins and an ingenious windshield is arranged for the benefit of the steersman.

Anchor Light and "Burglar" Alarm.

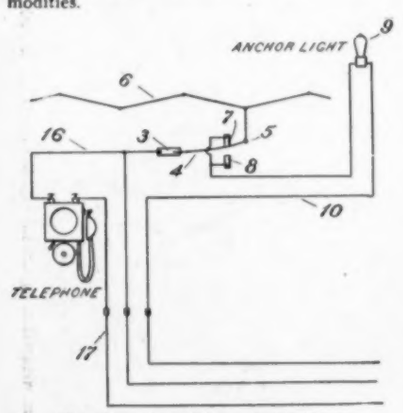
Yes, and Telephone, Too. All Three in One Ingenious Electrical Arrangement. How to Light-Up the Boat Without Leaving the House.

By E. W. Marshall.

AN ingenious electrical arrangement for a mooring has been worked out recently by an enthusiastic motor boatman, and the idea may be utilized by any one who may be fortunate enough to have his anchorage near his residence.

The mooring itself is an ordinary mushroom anchor to which was connected a floating buoy by a chain. A three-wire waterproof cable was connected from the buoy to the house on shore. A number of rings large enough to slip down over the chain were fastened at intervals to the electric cable with a weight connected to the lower ring. Then, with the chain pulled up taut, the rings were slipped down over it. The weight carried the lower ring down to the mushroom and as many of the rings as could be reached were tied to the chain. This held the cable parallel with the chain, and its upper end was run up through the buoy and connected with the socket of a three-way plug connector on the top of the latter. The other end of the cable was led to the house and connected with various apparatus which I will describe.

The boat is an open speed boat, and was provided with a tarpaulin cover, and the necessity for the ingenious arrangement arose from the fact that this tarpaulin had often been removed by friendly neighbors who found that it was easier, especially on a dark night, to "borrow" a wrench, or an oar, or a piece of rope, than it was to buy these commodities.



Showing the wiring at the boat.

In the wiring diagram 1 designates a switch; + and — are the mains of the electric light installation in the house. One of these mains was connected through one of the wires, 2 of the cable, with a stationary block 3 in the boat. This carried a spring 4 in the end of which was a rope 5, which was connected with the rope 6, which rope was used to lace the tarpaulin onto the boat. On opposite sides of the spring 4 were stationary contacts 7 and 8 which were electrically connected together, and with one of the terminals of an incandescent electric lamp 9 which was used as an anchor light. When the tarpaulin was in place and the rope 6 hauled taut, it pulled the spring 4 over against contact 7.

The other terminal of the lamp was connected back to the house through wire 10 of the cable, and through the winding 11 of a relay magnet in the house, and to the other side of the switch 1. This completed the anchor light circuit which could obviously be opened or closed at will by manipulating the switch 1. In this particular installation the switch was an automatic time switch set to open at 4:30 a. m.

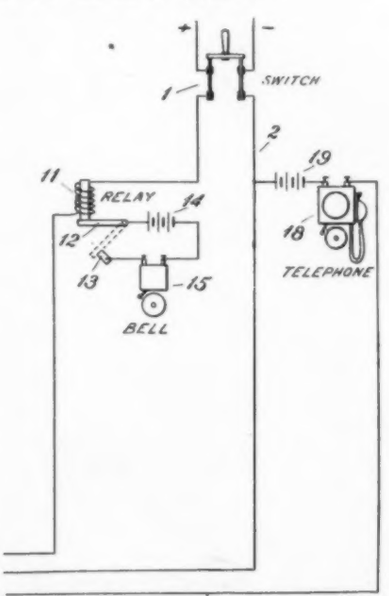
The relay magnet had a heavy pivoted armature 12 which, when released, fell down upon a contact 13 and thus completed a local circuit from a battery 14 through an alarm-bell 15. This part constituted a burglar alarm and worked as follows: As soon as the tarpaulin rope 6 was untied and loosened it allowed the spring 4 to move away from contact 7 and onto the contact 8, thus momentarily breaking the anchor-light circuit. But the momentary cessation of current flow through the relay magnet 11 allowed the armature 12 to fall and to establish the local circuit through the bell 15. The armature 12 in this new position was too far away from the core of the relay to be pulled back again when the current was re-established in the winding 11.

The bell gave notice to those in the house that someone was tampering with the boat, and effectively broke up the neighbors' habit of borrowing. Our enterprising fisherman attempted to put the alarm out of business by unscrewing the lamp 9. Of course this caused the alarm relay to work, and the only different effect that this had from the usual operation of the device was that it deprived the would-be "borrower" of the advantage of the light.

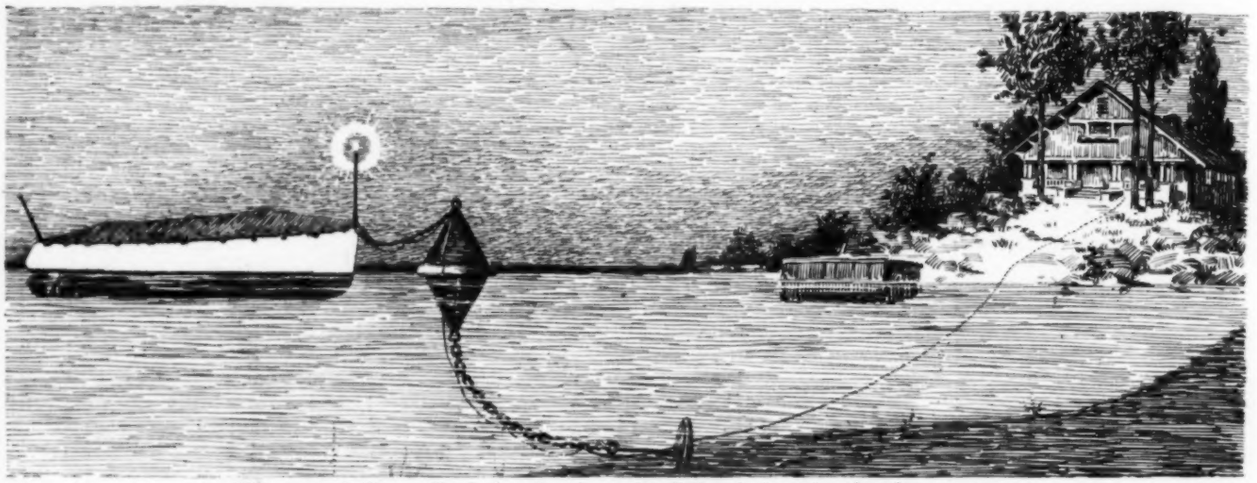
But my friend also made use of the electrical connections to install a telephone in the boat and another in the house. This was done by connecting one of the wires 16 from the telephone in the boat with the cable wire 2 and its other wire with the third cable wire 17. This cable wire 17 was connected with one of the leads of a similar telephone set 18 in the house, the other lead of which was connected through a battery 19 with cable wire 2. This afforded telephonic communication between the house and the boat.

Of course the circuits on the boat had to be separably connected with the cable terminal. This was done by means of a three-way plug which was inserted in the sockets on the buoy after the boat was tied up.

This clever arrangement was worked out and successfully used by Mr. Alden L. McMurtry at his residence at Sound Beach, Connecticut, with the mooring of his little speed boat "Damphyno." By its use the owner was able to sleep in peace without fear of having his boat molested by tamperers.



Showing the wiring at the land end.



The general "lay-out" of the electric anchor-light-telephone-burglar-alarm system.

Motor Boat Insurance.

The Importance of a Thorough Understanding of What it Covers, to Those Who Own Boats. A Detailed Explanation of the "Yacht Policy" Used by the Principal Companies.

By George Wood Hays.

IT is probably unnecessary to say that yacht insurance is something that every motor boat owner should have, and is just as important, if not more so, as fire insurance on your dwelling.

There are two important things to be done when taking out a yacht policy. The first one is to be sure and see that your premium is paid promptly, and the second one is to read your policy over. It is extremely necessary to read your policy carefully, so that you may see exactly what you are covered against. I think, therefore, that the easiest way to make my subject clear would be to discuss the policy at length, but before doing so, let me impress upon you one thing—no matter how familiar you may become with a yacht policy, always read it over every time it is renewed, especially any extra clauses which might be attached, as it may save you lots of trouble. In case of a loss, if your company is a good one, and you know your policy, you can rest assured that if you have a legitimate claim you will receive fair treatment.

The Yacht Policy used by the principal insurance companies of America starts out as follows:

"This Policy of Insurance witnesseth that..... (the name of the company) by these Presents, do cause..... (the name of the owner) to be insured in the sum of..... (amount of dollars), lost or not lost, at and from ..... (length of time, which is generally one year)."

Of course, this clause is very easily understood, it simply giving the amount of insurance and the period for which the policy is taken out.

The next clause reads as follows:

"As employment may offer, in port and at sea, in docks and graving docks, and on ways, gridirons and pontoons, at all times, in all places and on all occasions, services and trades whatsoever and wheresoever, under steam or sail upon the Body, Tackle, Apparel, Ordnance and Munitions."

This clause covers your boat wherever she may be, except as restricted by subsequent clauses in the policy.

The next clause reads as follows:

"Artillery, Boat and other Furniture of and in the good ..... (gasoline, motor, or sail yacht, whichever the case may be)."

This is merely to give a description of what the insurance covers, it being the boat and all her necessary fittings.

The next clause reads as follows:

"Yacht called the ..... (name of the boat), or by whatsover other name or names the said ship is or shall be named or called, beginning the adventure upon the said ship, &c., as above, and shall so continue and endure during the period aforesaid."

This clause is merely to identify the yacht.

We then go on to a clause which reads as follows:

"Should the above vessel be at sea on the expiration of this Policy, it is agreed to hold her covered until arrival at Port of destination on her being moored therein twenty-four hours in good safety (provided that before the expiration the Assured shall have given notice of intention to so continue) at a pro rata monthly premium, and it shall be lawful for the said ship, &c., to proceed and sail to and touch and stay at any Ports or Places whatsoever or wheresoever without prejudice to this Insurance."

Referring to the expiration date as above—we will take for example that if your policy expires July 15th, and you cruise from Boston, Philadelphia as your destination, and you realize that you will not get there before the time your policy expires, you may notify the company to this effect and they will insure you until your arrival at Philadelphia, giving you the privilege to stop at any port or place on your voyage, and for this extra time they will charge you a pro rata monthly premium. It is always a good thing, before starting off on a long trip, to be sure that there is no possible chance of your policy expiring, for if the same should happen, and you have not notified the company, any loss which you sustain after the expiration would naturally have to be borne by you.

The policy goes on to say:

"Any deviation beyond the limits named herein shall only render this Policy void during the time the vessel is outside the said limits, and upon the safe return of the vessel within said limits, in sound condition, this Policy shall reattach in full force and effect."

On all yacht policies there is a clause attached giving you limit of waters, the usual clause being: *"Warranted confined to the use and navigation of the inland and coastwise waters of the Atlantic Coast, between Norfolk and Eastport, Me."* If, at any time, you should cruise beyond these waters, you are doing so at your own risk, but as soon as you return to the within limits, your boat is then at the risk of the underwriters, providing, of course, that no disaster has happened during the time you have violated your policy. If you are ever contemplating a trip outside the said limits, it will be much the wisest thing for you to apply to your company for privileges of doing so, for which they will charge you an extra premium, proportionate to the risk run. In doing this, you will be on the safe side.

The next clause is overlooked by the average person in reading over his policy. It goes on to say:

"The said ship, &c., for so much as concerns the Assured, by agreement between the Assured and Insurers in this Policy, are and shall be valued at ..... (amount of dollars), to be agreed upon at the time the risk is written."

The Marine Policy, being a valued policy, it is important to insure your boat for its full market value, unless you, yourself, desire to run a portion of the risk.

If the boat is both insured and valued at her full market value, her owner, under a policy such as has been outlined, is fully protected against all the perils insured against; if, on the contrary, from a desire to save money he insures her at let us say one-half of her market value, but values her at her market value, he runs the risk of partial and total loss upon the difference between the amount of the insurance and the value expressed in the policy, if, per contra, he insures her for only one-half her market value, valued at that sum, while he would be protected against all partial loss, up to the amount of his policy, he would, nevertheless, run the risk of total loss on the difference between the market value and the amount of his policy.

The next clause in the policy reads as follows:

"Touching the Adventures and Perils, which we, the said Insurers, are contented to bear and take upon us, they are of the Seas, Fires, Pirates, Rovers (meaning thereby assailing thieves, who deprive the owner of the entire property hereby insured, but it is expressly understood and agreed that this Policy does not cover the risk of sneak thievery or pilferage), Jettisons and of all other Perils, Losses and Misfortunes that have or shall come to the Hurt, Detriment or Damage of the said ship, &c., or any part thereof."

Let us consider its first words, viz.: *"perils of the seas"*—what are "perils of the seas?" In brief, the term "perils of the seas" is expressive of the extraordinary dangers which are peculiar to that element. It includes all marine hazards and casualties resulting from the violent action of the elements as distinguished from their silent, gradual influence upon the vessel, and embraces all kinds of marine casualties such as shipwreck, foundering, stranding, etc., and every species of damage to the ship or goods at sea by the violent and immediate action of the winds and waves not comprehended in the ordinary wear and tear of the voyage, or directly referable to the acts and negligences of the assured, as its proximate cause. You will note that ordinary deterioration or damage comprised under the head of "wear and tear," and which is incidental to employment in navigation and exposure to the ordinary action of the elements, is not recoverable as damage by perils of the seas. Vessels cannot be navigated without encountering the action of the wind and waves, and are often liable to come into contact with piers, jetties, etc., in the ordinary course, during employment. Accordingly, the deterioration or injury which is the inevitable result of such employment, is not recoverable as damage by perils of the seas, for the latter expression refers to casualties which may, and not incidents which must occur.

Therefore, all loss or damage which the vessel or her cargo sustains at sea, owing to the extraordinary action of the elements, is attributable to perils of the seas. *Foundering*, which means going to the bottom, is accordingly included in this extensive term, if caused by the violence of winds or waves, but not so if caused by overloading, defect or inherent weakness, which conditions would violate the implied warranty of seaworthiness. *Grounding and stranding* fall under the same designation if extraordinary, but not so if it takes place in the ordinary course of navigation, as when vessels are sent to a tidal harbor where it is expected they will lie ashore during the time the tide is out. *Collision* is a peril of the sea. Damage to the ship by the violent action of the winds and waves is recoverable under the heading "perils of the sea."

The next peril enumerated in the above clause is that of *fire*, and it will be enough regarding this peril to say that loss directly occasioned by fire, is one of the losses assumed by underwriters.

Pirates, rovers and thieves, as stated in this clause, means assailing thieves, who deprive the owner of the entire property hereby insured, but it is expressly understood and agreed that this policy does not cover the risk of sneak thievery or pilferage. In other words, pirates, rovers and thieves are considered altogether as referring to unauthorized persons who take by violence, any or all of the property insured.

Jettison signifies the throwing overboard of part of the cargo or any article on the ship, or the cutting away or the casting away, of masts, spars, riggings or other furniture, for the purpose of lightening or relieving the ship, in case of necessity or emergency.

The next clause, known as the "Sue and Labor" clause, reads as follows:

"And in case of any Loss or Misfortune, it shall be lawful to the Assured, their Factors, Servants and Assigns, to sue, labor and travel for, in, and about the Defence, Safeguard and Recovery of the said ship, &c., or any part thereof, without prejudice to this Insurance; and to the Charges whereof the said Insurance Company will contribute according to the Rate and Quantity of the sum herein insured. And it is especially declared and agreed that no acts of the Insurer or Assured in recovering, saving or preserving the property insured shall be considered as a waiver or acceptance of abandonment; having been paid the consideration for this Insurance by the Assured or Assign, at and after the rate of ..... per cent."

This clause constitutes an agreement supplementary to, and distinct from, the main contract to indemnify the assured against loss or damage to the subject insured.

Its object and general scope is to encourage the assured, in case of accident, to make exertion for the preservation of the property insured, by agreeing that such action shall be without prejudice to the insurance, and by a promise on the part of underwriters to contribute to any expenditure which may be incurred by the assured or his agent in an effort to avert an impending loss.

It must be noted here that this clause only comes into effect on account of the happening of any loss or misfortune covered by the pol-

icy, for it is manifest that if property is subjected to a danger not assumed by underwriters, the latter have no interests in any efforts which may be made for the protection of the subject insured; as for instance, if a ship was insured free from claim for capture, and was in danger of being taken by an enemy the Underwriters would have no interest in any expenses which the assured might incur in her safeguard or defense. The terms of this clause are considered as being mandatory upon the assured to make every reasonable exertion to save the property insured from loss or damage, and if he fails to do so the resulting loss will not be recovered under the policy.

The persons who are especially authorized, in the terms of this clause, to render services to the property, are the "assured," their "factors," "servants," and "assigns," which means that the assured, themselves, and their agents, be they direct or voluntary but not salvors.

The next clause reads as follows:

"This Policy shall be cancelled at any time at the request of the Assured, or by this Company, by giving ten days' written notice of such cancellation. If the premium has been paid, eight per cent. of same shall be returned for each thirty consecutive days of unexpired time of the working period and four per cent. shall be returned for each thirty consecutive days of unexpired time of the lay up period, to the termination of the Policy, provided it is promptly surrendered to this Company."

The above is very simple and needs no explanation.

The policy further states:

"To pay any loss, if amounting to one per cent. of the valuation of the boat, without any deductions, but salvage claims to be paid in full irrespective of amount, not exceeding the amount insured hereunder, and in all cases in proportion as the sum herein insured bears to the agreed value of said vessel as herein stated."

This clause means that the company would not be liable for any loss, unless amounting to one per cent. of the valuation of the boat, except in case of salvage claims.

It also covers its proportion on any boat used exclusively as a tender to the vessel herein insured, but this company shall not be liable for any loss to said tender while it is in tow.

The next clause is one about which very few people know, and which is a very liberal one on the part of the company. It reads as follows:

"It being agreed that should any part of the furniture, tackle, boats or other property of this yacht be separately stored on shore (or should the tender not be on board the yacht) during any portion of or the period of this Policy, then the liability on hull and appurtenances on board shall be decreased by the proportionate insured value of the property thus separated, but this Policy shall cover such property (excepting the tender when not stored nor in tow) against the risk of fire only, and all for an amount not exceeding its proportion of ten per cent. of the valuation of the Policy."

This clause gives the owner the privilege of storing any of the furniture, tackle, boats or other property anywhere ashore, no matter what the fire rate may be, without extra cost, that is to say, when laying your boat up in the winter, you desire to take the cushions and various small articles off your boat and house them somewhere ashore—in the boathouse or in some storage warehouse—you may do so without extra charge, up to the amount of ten per cent. of the policy; that is, if your policy is $2,500, it will cover up $250, it being understood, of course, that the insurance on the hull is decreased proportionately. In other words, if your policy is insured for $2,500, and you store $250 worth of fixtures ashore, the amount on the hull is reduced to $2,250. You are also given the privilege to sail with or without pilots, and to tow and assist vessels and craft in all situations, and to be towed and go on trial trips.

The next clause reads as follows:

"It is also agreed that this vessel be warranted by the Assured free from loss or damage arising from riot, civil commotion, capture, seizure or detention, or from any attempt thereat, or the consequences thereof, or the direct or remote consequences of any hostilities, arising from the Acts of any Government, people or persons whatsoever (ordinary piracy, as explained above, excepted), whether on account of any illicit or prohibited trade, or any trade in articles contraband of war, or the violation of any port regulation or otherwise. Also free from loss or damage resulting from measures or operations incident to war, whether before or after the declaration thereof. This Company shall not be liable for sails, masts or spars carried away while racing."

This clause needs no explanation, neither does the following clause, which reads:

"In the event of risk of war being assumed by endorsement under this Policy, the Assured warrant not to abandon in case of capture, seizure or detention, until after the condemnation of the property insured; nor until ninety days after notice of said condemnation is given to this Company. Also warranted not to abandon in case of blockade, and free from any expense in consequence of detention or blockade; but in the event of blockade, to be at liberty to proceed to an open port and there end the voyage."

The next clause reads as follows:

"General average payable as per foreign custom if required, or per York-Antwerp Rules, if in accordance with the contract of affreightment."

To go into the subject of general average thoroughly would take up too much space. A general average act is the intentional voluntary sacrifice of the master or other proper persons, in order to rescue ship, freight and cargo, from a common impending peril. General average arises through the voluntary sacrifice of a part of a sea adventure for the benefit of the whole, or through expenditures incurred for the common welfare. The principles of contribution have not, however, been limited to cases of sea perils. They have been applied in cases of sacrifice to extinguish a fire whereby sundry interests were saved at the cost of one.

The next clause reads as follows:

"And it is further agreed, that if the ship hereby insured shall come into collision with any other ship or vessel, and the Assured shall in consequence thereof become liable to pay, and shall pay any sums (not exceeding the value of the ship hereby insured) in respect of injury to such other ship or vessel itself, or to the goods and effects on board thereof, or for loss of freight then being earned by such other ship or vessel, the Insurers will pay the Assured such proportion of four-fourths parts of said sums as the amount hereby insured bears to the value of the ship hereby insured. But this agreement is in no case to be construed as extending to any sums which the Assured may become liable to pay, or shall pay in respect of loss of life or personal injury to individuals, from any cause whatever."

This clause is known as the "Four-fourths Collision Clause." It was originally written at three-fourths, but so many companies, in order to give a little more liberal policy, increased it to four-fourths, so that name has clung to it ever since. The meaning of this clause is this:

If you are in collision with another vessel and you are liable for damage done to same, the company will pay this damage, providing it does not exceed the amount of your policy. Of course, you cannot expect them to pay the full amount, if the damage done to the other vessel was $1,000, and you only had $500 insurance on your boat. But this does not cover loss of life or personal injury to individuals:

The policy further states:

"Provided the property hereby insured is valued herein at $1,000 or more, but not otherwise, this insurance shall also specially cover (subject to the average, and all other conditions of this Policy not conflicting herewith), loss of or damage to hull or machinery through the negligence of master, mariners, engineers, or pilots, or through explosions, bursting of boilers, breakage of shafts, or through any latent defect in the machinery or hull, provided such loss or damage has not resulted from want of due diligence by the owners of the ship, or any of them, or by the manager; but free from any claim for the part in which the latent defect existed."

This paragraph speaks for itself, and, therefore, the writer does not think it necessary to go into details, as does also the last paragraph of the policy, which reads as follows:

"It is agreed that change of interest in the vessel hereby insured shall not affect validity of this Policy. Nevertheless, it is also agreed that this insurance shall be void in case this Policy or the interest insured thereby shall be sold, assigned, transferred or pledged in toto without the previous consent in writing of this Company."

There are two clauses printed on the side of the policy, one of which is very important. It reads as follows:

"Warranted by the Assured that the within named vessel shall be laid up and out of commission from November 1st, at noon, until April 15th, at noon."

If your boat is not laid up during that period, any loss which may occur must be borne by you, unless you notify the company beforehand, and secure a permit for an extended time, paying an additional premium for same.

The other clause reads:

"Privilege given to carry gunpowder for saluting and sporting purposes, and to use kerosene for cooking and lights, and gasoline for fuel."

This permission is given you more as a courtesy than anything else, and arrangements can be made with the company to use other fuels, by having endorsement placed upon your policy, providing, of course, that they are of a safe nature.

What Happened at Peoria.

Remarkable Performance of Sand Burr II, the 20-Footer, in Winning all but the 40-Foot Class. How Disturber II Broke Her Steering Gear, Was Beaten by Red Top III and Sank.

THE usual large crowd of motor boat enthusiasts that the annual regatta of the Western Power Boat Association always brings to Peoria, lined the banks of the Illinois for several miles to witness the third annual regatta of that organization, held on July 25 and 26, under the supervision of the Illinois Valley Yacht Club.

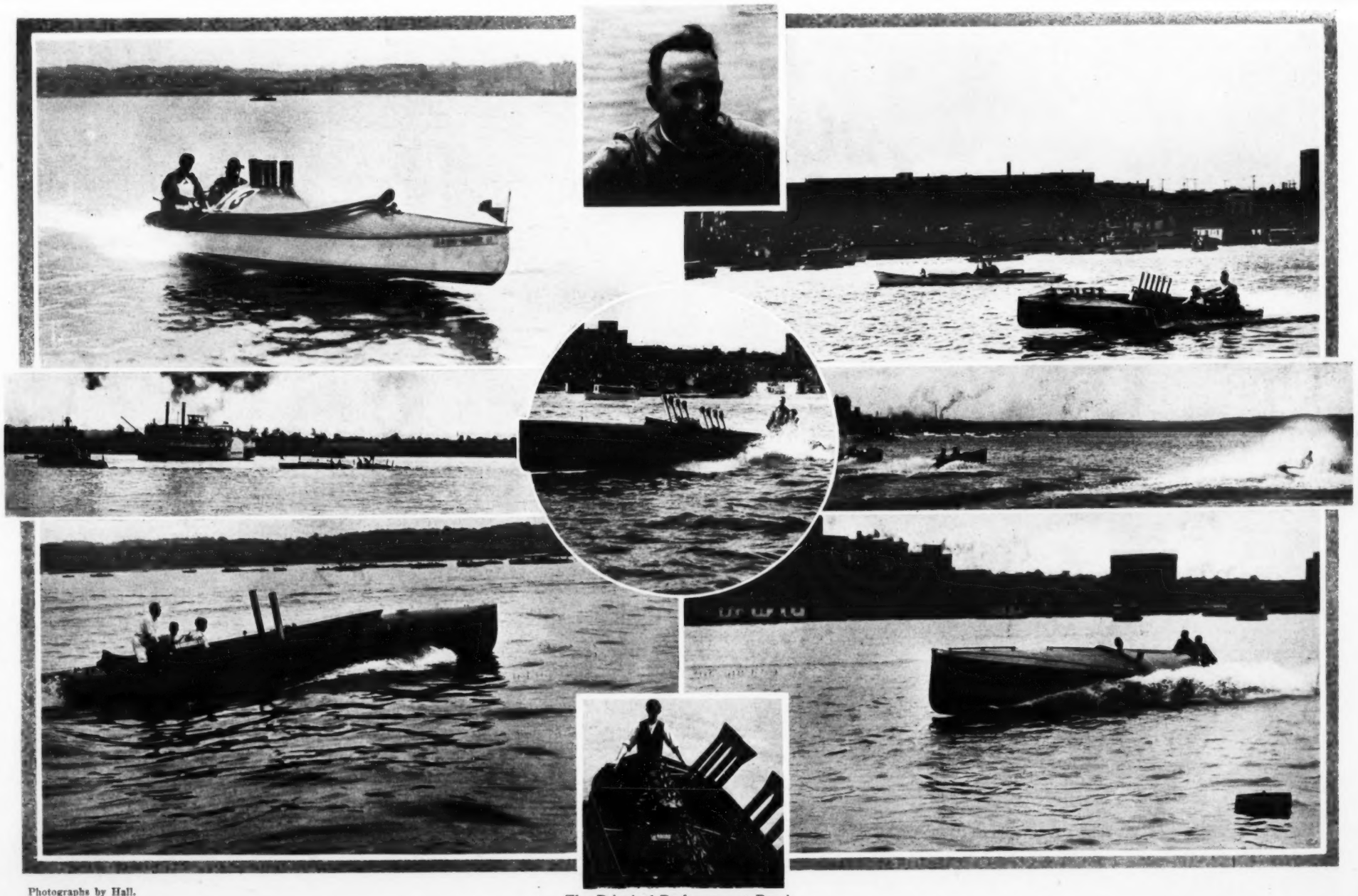
As we have learned to expect in the past, records were again broken, and the various events, while not so well filled as on other occasions furnished plenty of spectacular racing.

Little Sand Burr II, the 20-foot stepless hydroplane, designed and built by Adolph A. Apel, of Ventnor, Atlantic City, owned by C. D. & A. R. White, and powered with an Emerson engine, was the favorite of the meet, and in fact, was pretty much the whole show. She entered every race and won in all except the 40-foot class, in which she had to compete with the two Fauber hydroplanes, Red Top III, and Disturber II, the champion from Dubuque, besides Eph, the Seabury 39-footer, and the 34-footer Premier III.

The ten-mile race for 20-footers was the first to be run on July 25th, and Sand Burr II, Regal Tiger, Leading Lady, Comet, Scamp, and A. K. finally got away in a bunch. Sand Burr had a close call at the start. When her full power was thrown in, her nose was driven under, and she dived until only her cockpit and stern remained above water. But to the astonishment of the spectators, she recovered easily, shed the water from her crowned deck, and got away like a shot at 30 miles an hour. Regal Tiger, expecting a recall, returned to the starting line, and when these two boats finally got settled on their courses, the gap between them and the field seemed too great to close.

Astonishment gave way to enthusiasm and great applause when it was seen that the first boat tearing down on the judges' barge was Sand Burr II, having not only overhauled, but passed the other boats in the first round of the course. She maintained her lead, and finished the ten miles in slightly better than 20 minutes, or at the rate of over 30 miles an hour. Regal Tiger, Leading Lady, Comet and

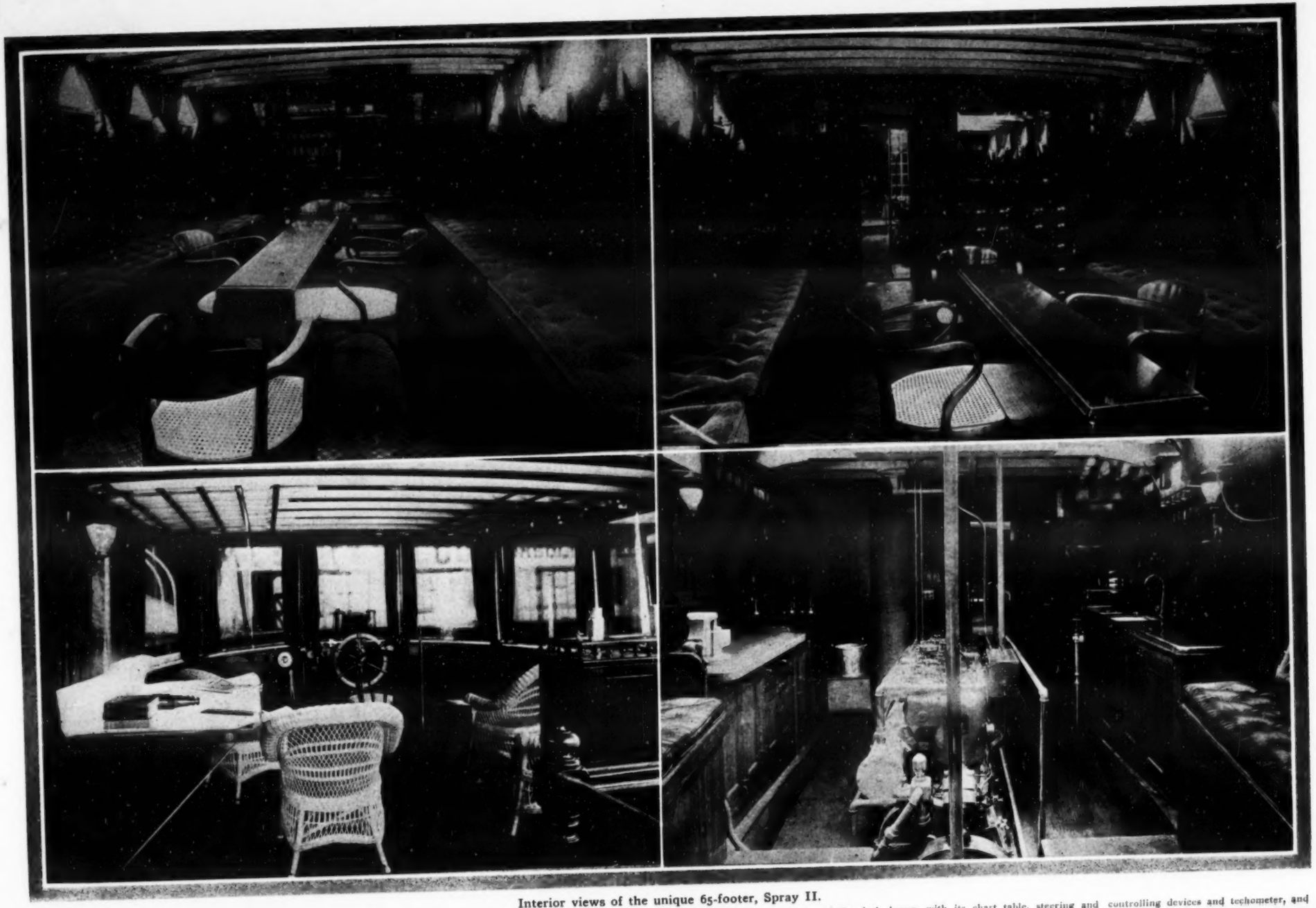
(*Continued on page 62.*)



Photographs by Hall.

The Principal Performers at Peoria.

Above on left, Sand Burr II, the 20-footer that won in everything but the 40-foot c lass. On right, Leading Lady, another 20-footer. Below on left, Disturber II. On right, Eph, Carl G. Fisher's 40-foot Seabury racer. The middle, upper and lower inserts are of Red Top III, her owner, W. E. Hughey, and her 8-cylinder Bellevue motor. The other inserts show Disturber sinking and Sand Burr Diving at the start of the 20-foot class.



Interior views of the unique 65-footer, Spray II.

Above are two views of the main cabin looking aft and forward; abundant light is supplied by 16 drop sash windows. Below are shown the interior of the deck house, with its chart table, steering and controlling devices and tachometer, and on right the engine room and galley.

Spray II—A Departure.

SPRAY II is the fourth "Speedway" motor boat built for Mr. Henry B. Joy, of Detroit, Michigan, president of the Packard Motor Car Co., within the past four years. In many respects she is a unique type of small cruiser, for she combines a large deckhouse with a raised deck.

Last year Mr. Joy, who uses his boat for deep sea fishing off Montauk, Block Island, and adjacent waters, desired a cruiser in which he could go out in rain or shine, blow high or blow low, and yet be dry and comfortable, for he is his own helmsman and has no wish to be drenched to the skin in rainy weather, or high seas. He wanted also a cabin where he could be dry and cosy, and yet see something of what was going on outside, without ineffectually squinting through an eight or ten-inch port hole.

Spray II was designed and built by the Gas Engine & Power Co., and Charles L. Seabury & Co., Consolidated, this spring, and has just been delivered to the owner. The accompanying illustrations give a most excellent idea of the boat. The sides are high enough for good head room, with plenty of beam to insure steadiness, and an ample flare to the sides forward to throw off the sea.

The deckhouse is a combined pilot-room, lounging and writing room, and has, besides the writing desk, a bookcase and chart table. A stairway leads below to the living quarters. By a novel arrangement the engine can be started, run slow or fast, reversed or stopped by the man at the wheel in forward end of deckhouse. To determine the possibility of proving definitely the qualifications of a one-man boat, the builder's guarantee included a trial test of ten hours continuous run, without touching the engine after starting; in fact, with locked engine room.

The finish of the deckhouse and all exterior work, such as hatches, doors, gangways, etc., is of polished mahogany. Below decks the finish is white enamel, with mahogany trim in owner's quarters. Engine room, crew's quarters and galley are finished in butternut. The deckhouse has sixteen extra heavy plate glass windows arranged to drop into lead-lined pockets, with drains to main deck; these windows are screened on the outside with bronze screening. There are curtains arranged on brass rods. The deckhouse is made portable, so it can be removed to allow the boat to go through the canals between New York and the St. Lawrence River, and the Great Lakes.

Dimensions of Spray II.

Length over-all	65 ft.
Beam	12 ft. 6 in.
Depth of hull	6 ft. 2 in.
Draft	3 ft. 8 in.

Motor—6 cyl., 6½ in. x 8½ in., 80-100 h.p. Speedway.

Designers and builders—Gas Engine & Power Co. and Chas. L. Seabury & Co. Cons.

Owner—Mr. Henry B. Joy, Detroit.

There is a large flush-deck aft, with wicker chairs and table, and bronze railing with rope netting. The yacht also carries regular yacht boarding gangway and davits, leading to the after-deck. There are three 24 in. scuttles with gratings which lead to stowage quarters below.

From the after-deck is a companionway with sliding hoist leading to the large and spacious saloon. Contrary to usual practice, the space below is not cut up into small staterooms, but left in one large cabin, the partitioning off for sleeping quarters being effected by use of portières.

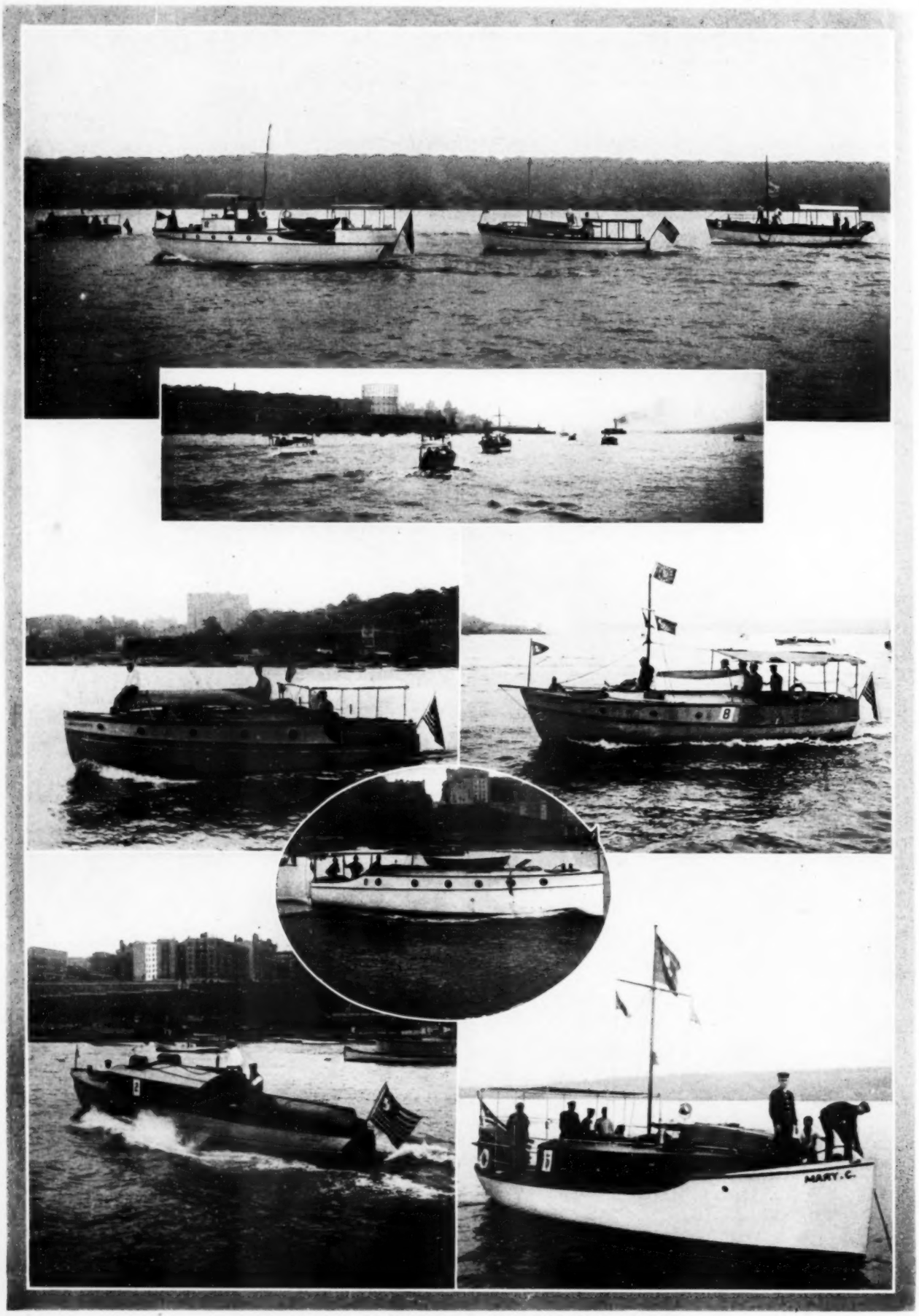
One of the novel features of Spray II's engine is its air-starting device. This does away with all the strenuous manual labor in connection with starting, the fear of which often deters the prospective buyer from becoming the owner of a motor boat. The device is simple. A compression on the engine keeps a tank supplied at 100 lbs. pressure for starting and supplying the whistle. A tank full of air is sufficient to start the engine 60 times without recharging. A distributor box containing six valves, one for each cylinder, is secured to the after-end of the frame. These valves are opened by a hardened steel cam, pinned to the camshaft, the cam being timed so as to adjust air to the respective cylinders on the top center of the firing stroke. Air is delivered from the distributor box to cylinders through copper tubes connecting to small check valves screwed into spark plug holes in cylinder heads.

Lubrication is given special attention in the installation. Directly over the engine, fastened to the under side of the deck, is a 20-gallon tank which can be filled from the deck with lubricating oil. This tank is piped direct to the mechanical oiler on the engine. It is thus possible to fill the latter by simply opening a valve in this line, dispensing with the customary muss when lubricator has to be filled from a measure. This mechanical lubricator on the engine has feeds to each cylinder and main bearing, contains sufficient oil for a 12-hour run without replenishing. By means of oil holes in the base and a pump which is constantly transferring the oil from the after compartment to the forward one, a constant level for the splash system is assured. A bilge pump driven from the forward end of camshaft provides for clearing the bilge at will.

In the deckhouse from left to right are located barometer, clock, Hopkins electric tachometer, binnacle, spark and throttle controls, pressure gauge, speed chart and reverse lever. (See opposite page.)

By means of the tachometer the revolutions can be very accurately determined. A speed chart consisting of a curve giving speed over a measured mile at different revolutions has been placed in the deckhouse, so that by plotting the revolutions read from the tachometer upon this chart the speed of the boat at any given time may readily be determined.

The most striking feature of Spray II is her large deck house, which is removable.



Contestants in the first annual race from New York to Camden.

Above are shown Wachusett, Half Moon, Respite and Seneca in the order named. Just below is the start and the boats in the lower photographs are Wachusett, Eugenia, Inevitable and Mary C., with Chelwood, the winner, in the insert.

New York to Camden.

The Successful Running of the 225-Mile Ocean Contest, Which is to Become an Annual Event, With a Table of the Contestants, Their Times, Ratings and Engine Equipment.

By C. F. Chapman.
Measurer of the New York Motor Boat Club.

NINE able and seaworthy cruisers lined up at the starting line off the club house of the New York Motor Boat Club a few minutes before ten Friday morning, August 4th, awaiting the signal to start on their 225-mile ocean race to Camden, N. J. The tide was at the last of its ebb and consequently the current was running down stream at about a three-knot rate. This called for the helmsmen to exhibit their greatest manœuvering ability and several of them were equal to the task, for hardly had the smoke arisen from the starting gun when Wachussett, the little grey cruiser, navigated by Com. E. C. Headley, of the Camden Motor Boat Club, dashed across the line, four seconds after the gun.

Inevitable, the already famous cruiser of A. Johnson was only a fraction of a length behind, followed by Respite and Chelwood with their bows exactly in line, making the first four boats over within 20 seconds. The remaining five were not far behind and as all the six boats from the Delaware clubs dipped their ensigns simultaneously immediately after passing the committee boat, it was a sight worthy of the occasion.

This race in which six boats from the clubs along the Delaware came to New York to test their speed with the three boats entered from New York waters which have already won renown in several races this summer, was held under the auspices of the New York Motor Boat Club and the Camden Motor Boat Club, this being the first year that such a race has been attempted. Its success warrants its repetition in 1912 when it will be sailed in the opposite direction.

The race was for cruising boats of not less than 30 feet overall length, and not exceeding in the greatest length of 50 feet overall, and with a waterline breadth of not less than one-fifth of the waterline length, and enrolled in any recognized club. The course was from the New York Motor Boat Club, New York, down the Hudson River to New York Bay, passing Sandy Hook, Barnegat, Atlantic City, Cape May to the Delaware Bay, thence up the Delaware River to the Camden Club.

The course selected is one combining more elements of navigation than almost any other possible to select in Eastern waters. It necessitated the passing through two of the busiest harbors on the Atlantic seaboard, a long ocean sail down the coast from Sandy Hook to Cape May, the rounding of the capes and encountering the treacherous rips off Cape May, and the ninety-mile run up the river from Cape May to Camden.

The boats began to arrive at the anchorage of the New York club on Monday before the race and spent their spare time cruising up the river. A notable feature was the number of boats that had ladies aboard and the members of the New York Motor Boat Club did all in their power to make the crews at home during their stay in these waters.

The boats were all measured on the day previous to the race by the measurers of the two clubs, Messrs. J. C. Vanderslice and C. F. Chapman. By six o'clock all the ratings and handicaps had been figured and announced to the crews and it was found that the big Seneca with her three-cylinder Lamb engine would have almost eleven hours handicap on the Inevitable. Aside from the latter's extremely high rating, the ratings of all the other boats were quite close and it appeared that there should be some close racing. This proved to be the case as far as Sandy Hook, but immediately after rough water was reached the boats that had been running side by side for 30 miles began to separate and were hours apart at the finish.

In overall length the boats varied from 30 feet, which the little Eugenia was only able to come up to by including her bowsprit in the length, to which was rigged the fore and bob-stays to their tiny signal mast, and the 45.65 feet of Tranquil. The former boat is the one that made such a memorable run in the fog this year in the Fire Island Race. Tranquil's lines are very similar to those of Ilys of Bermuda fame. Half-Moon, which is owned by the rear commodore of the Rhode Island Yacht Club of Providence, was only about an inch shorter and was also built from the same lines.

Chelwood reminded one of Monreve, the Albany Race winner, and Mary C., the winner of the Cape May Race this year, was entered also. Respite, winner of second prize in the Albany Race, was the boat the New York Motor Boat Club men hoped would win fame for their club.

Wachussett, a grey cruiser, entered from the Camden Motor Boat Club and owned by W. P. Bradford, looked fit to make a voyage of almost any length. She had on board probably the most experienced crew and practically a duplicate of every part of her engine and equipment excepting a check valve, and it was this little part that lost them a place among the leaders at the finish. A list of various dimensions, power, etc., of all the starters is given in the attached tables.

Arrangements had been made before the start with the light-house keepers along the Jersey coast whereby they would telephone to the Camden Club the times that the boats passed by reporting their numbers if they passed by daylight and the color of their Coston signal, with which the boats were supplied, if they passed in the night. About nine o'clock the first of these began to be reported to the large gathering at the Camden Club, and throughout the night reports kept coming in and interest ran high as it appeared that Mary C., Half Moon and Chelwood were running practically together.

It was figured that they should finish about noon on Saturday, and a few minutes after that time Mary C. was sighted and crossed the finish line at 12:23:56 amid great enthusiasm, as she was the Camden Club's "dark horse" on which they banked their hopes to win first place.

It was over an hour later when Chelwood finished and still another hour and a half before Half Moon finished. These three boats, which had been on practically even terms during the first half of the race, had become widely separated on the run around Cape May and up the Delaware, due to their taking different courses. The crew of the Mary C. knew the waters and took advantage of every short cut, while those on the Half Moon and Chelwood did not care to take such chances. Half-Moon followed the ship channel all of the way and lost over three hours by it.

A little before four o'clock the gatling gun exhaust of Invincible was heard in the distance to the south, and as she approached the finishing line the exhaust of one of the aeroplanes racing from New York to Philadelphia also could be plainly heard, and the two fast "cruisers" passed the committee boat almost together, one overhead and the other alongside.

The officials of the Camden Motor Boat Club had procured the revenue cutter Vixen for a committee boat, and as soon as each boat finished, their crews were taken aboard and banqueted. The boats continued to finish at intervals during the afternoon and evening until at 10:12:12 Seneca passed the line and the race was history, every one of the nine starters having completed the course.

The crews reported a clear dark night, without much wind, but a heavy ground swell and a very choppy sea off Cape May. Several had some trouble—Inevitable lay to for ten hours off Cape May due to the gasolene supply pipe becoming clogged. Respite ran full speed into a fish net off Hereford Inlet and a steel cable caught between her propeller and rudder. To free this it was necessary to cut the cable in three places with hack-saws, no easy task at night with a heavy sea running, but they managed to succeed after two hours' work. Shortly after they got under way again they lost their rudder altogether and were compelled to steer the last 100 miles with two eight-foot skiff oars. Wachussett broke a check valve and had to put into Cold Spring until another could be procured from Cape May City, thus losing four and one-half hours.

The Rudder Trophy went to Chelwood, the Camden Motor Boat Club Cup to Mary C., and a barrel of cylinder oil to Half Moon. The other boats finishing received shields. The prizes were presented at the club house of the Camden Motor Boat Club, August 7th, by the Mayor of Camden.

The Contestants in the First Annual Race From New York to Camden.

Name.	Owner.	Club.	No.	Length.	Engine.	Cylinders.	Rating.	Time Allowance.	Time Elapsed.	Corrected Time	Miles Per Hour.	Position.
Mary C.	W. McWilliams	Camden	12	37.32	28 h.p. Standard	three 6x8	43.74	7:27:20	26:23:56	18:56:36	8.5	2
Chelwood	R. K. Sennig	Philadelphia	9	39.85	16 h.p. Hall	two 5½x6¾	39.60	9:44:55	27:38:51	17:53:56	8.15	1
Half Moon	G. W. Benschoten	Rhode Island	5	45.50	29 h.p. Pearl	four 5¼x6	43.56	7:32:38	29:13:13	21:40:35	7.7	3
Inevitable	A. Johnson	Yonkers	2	39.75	70 h.p. Eddystone-Globe	six 5½x5	67.07	Scratch	29:57:30	29:57:30	7½	9
Tranquil	M. B. Mergarzee	Yachtsmen's	10	45.65	45 h.p. Regal	four 5¾x5¾	45.00	6:51:18	30:35:56	23:44:34	7.35	5
Eugenia	E. Swayne	Flat Rock	8	30.00	38 h.p. Regal	two 5¾x5¾	38.34	10:28:01	34:06:07	23:38:06	6.6	4
Respite	V. C. Pedersen	N.Y.M.B.C.	13	37.45	38 h.p. Ralnco	four 4x6	38.52	10:21:14	34:59:07	24:37:53	6.43	6
Wachusett	W. P. Bradford	Camden	1	31.20	38 h.p. Buffalo	two 6x7½	37.80	10:48:45	35:49:45	25:01:00	6.3	7
Seneca	H. Doerr	Philadelphia	4	39.65	38 h.p. Lamb	three 6½x7	37.62	10:55:59	36:12:12	25:16:13	6.2	8

Preparing for Astoria.

Oregon Wolf, Seattle Spirit and Some Other Speed Boats That Will Race for a Record. The Racing Situation on the Eve of the Big Annual Regatta of the Pacific Coast.

By Chester L. Wynn.

NEVER before has the Pacific Coast been keyed up to the point where it expects to set some new world's records for speed boats. Now it is confident that it will produce some figures that will make the motor boating world take notice. The greatest speed boat regatta ever held west of the Rockies will take place this month at Astoria, Oregon.

The events as listed by the regatta committee, which is working in conjunction with the committee in charge of the centennial celebration now in progress, include every type of boat, but the greatest interest is manifested in the speed races for the championship of the Pacific Coast, one the free-for-all and the other the free-for-all displacement. For the first event, which will permit the entry of hydroplanes or any type of boat, the first prize is $1,650, with the second and third graded to $825 and $525, respectively. In the displacement section the prizes will be graded $1,250, $750 and $500. Whether they are attracted by the substantial prizes or just naturally want to clean up everything on the Coast, the builders and enthusiasts have been talking nothing and preparing for nothing but the speed events.

The lineup of the motorboating people on the Coast this year is different from what it has been for some time back. In former years there has generally been one boat that so far outclassed everything on the water that the other owners were afraid or did not care to go to the expense of entering their craft. There have been two boats—Wolff II and Seattle Spirit—that have been taking everything before them with Pacer running a close third. One year Seattle Spirit would be on top and the next Wolff II would be the champion. The races between these two boats were always pretty affairs but the interest was not general enough to make the entire Coast watch their feats.

This year the talk is different as well as the action. Along the entire Coast new speed boats have been on the ways and at least a half dozen new craft are expected to be at the starting line on September 4 with a few other new ones as possibilities. The Astoria regatta committee announces that it will have at least twelve boats in the events but as a rule it is always well to cut these announcements in half and then discount them a little. The number this year depends entirely upon whether the lower Coast has been induced to send its boats to Astoria for the events. The California motor boatmen are clannish just as are the Portland and Seattle enthusiasts and those familiar with conditions know that it smacks of the miraculous when the two sections can be gotten together.

This year may see the two clans come together. Sacramento has listed Nunes' Flyer and Fighting Bob II as entries and the wires have been hot for some time about a new boat that is building at San Francisco. Coos Bay, Oregon, will have the Coos Bay, new boat in the list. John Wolf of Portland will have his new Oregon Wolf which has replaced Wolff II, last year's champion, which was burned last winter and a Seattle built boat will also be a sure entry. Two from Sacramento and one from 'Frisco, Portland, Seattle and Coos Bay each, would make a pretty race, arouse much enthusiasm which would be felt in years to come and turn the eyes of the country toward Astoria, which has been holding an annual regatta for years. It is to be hoped that the announcement after the races will not be that "owing to the great distance the Southern California boats were unable to enter." Speed boat racing on the Coast has its opportunity now when the boats are new. After the various ratings have been shown and speeds marked it will be too late. The process of elimination will then be made and the owners will revert back to the old basis of only entering those races where they are absolutely sure of their ground.

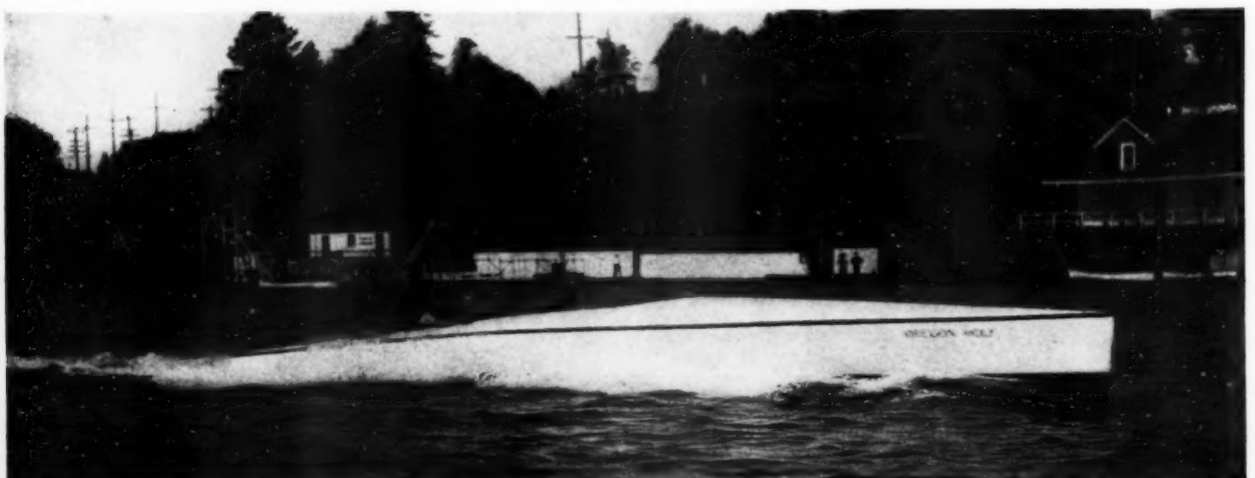
In Oregon Wolf, built by John Wolff, the Portland enthusiast, and the property of the Oregon Speed Boat Company, recently organized, the owners believe that they have a world beater. The boat which represents an investment of over $5,000 was launched June 3, but Wolff and his company have kept absolutely silent about her trials and what they expect to do at Astoria. The same air of secrecy has prevailed around every boat builder's place where an Astoria possibility was being constructed and the trial runs have been made at night even in order to keep the speed from becoming generally known. This is why the speed boat game has its opportunity this year —nobody knows just what the other fellow is going to do.

Oregon Wolff is 39 feet 4 inches in length by 5 feet 4 inches beam, and is equipped with a specially built 9-cylinder Smalley engine capable of developing 300 horsepower. Wolff has had much previous experience building champions, as his Wolff I won him several prizes and his Wolff II previously mentioned was at the top of the list. His new craft has twice the power of Wolff II and will be entered in every event to which it is eligible and if as successful as the owners hope, will be sent East to compete for championships there. Wolff and a number of Portland people have long looked with longing eyes on a world's record.

Seattle Spirit, which since the burning of Wolff II holds the Pacific Coast championship, will probably go into the races at Astoria under a new name as she is now owned at Portland. During the past few months she has been entirely overhauled at a Portland shipyard and two Leighton engines have been installed—one a six-cylinder and the other a four-cylinder. She has been equipped with twin screws and her engines are expected to develop 200 horsepower. Before the changes were made Seattle Spirit could on occasion run up to 34 miles per hour. Now the owner says that she will either beat everything on the Coast or be a total failure. It is a case of all or nothing as he sees it. His twin screws on the speed boat are something of an experiment and will be watched with interest.

Coos Bay, which has been kept under cover, is equipped with two 90-horsepower Elbridge engines and her builders guarantee a speed of near 40 miles an hour. She is entered in the displacement class. Charles F. Wise, of Astoria, this summer has built a new 30-footer which is equipped with a 90-horsepower Emerson engine while Charles Binkley of Seattle built the hull for a speedster which will be entered and which will be equipped with an 8 cylinder engine. All the owners will tell you confidentially what they expect to do at Astoria and if they turn up anything near what they say they are going to there will be some new figures for motor boatmen to think about after the events are all run.

The famous Nunes Bros.' Flyer, which is entered from Sacramento, has made over 34 miles per hour several times and her owners have made some improvements which they hope will bring her speed up a couple of notches. Fighting Bob II, her side partner from Sacramento, is about her equal in speed and the two have been fighting it out for the championship of the Sacramento River for some months.



Oregon Wolf, the pride of the Pacific. Built and owned by John Wolff, whose Wolf II won the championship of the Pacific Coast last season, it is expected that she will set a new figure for displacement boats when she enters the free-for-all at Astoria in September.

The Story of Sea Bird's Cruise.

Goodwin's Letters Telling of the Stop at the Azores and the Final Run to Gibraltar. Some Interesting Impressions of the Trans-Atlantic Cruise Written From Day to Day.

THE FIRST LETTER HOME.

WE left Cottage City about 9 o'clock Sunday a. m. with bright sunshine and a head wind, depending on the engine to get us along. At noon we passed out through the Muskeget Channel and took our departure from the land. The wind continued light and dead ahead, and we made slow progress. Fog shut in during the afternoon and we ran in it all night. Just before 7 o'clock Monday morning we heard the whistle on Nantucket Lightship and picked it up and asked to be reported. All day was light, with the wind continually ahead.

That night, during my watch, we entered the Gulf Stream. Oh, that Gulf Stream! It seemed impossible for us to get out of it and every time we would get to the southern edge the wind would drive us back in again. In the stream the weather is damnable. The warm water creates continuous electric storms with terrific squalls, until it seems there is no more good weather left in the whole world. That night we had our first dose. Continuous lightning played around and every couple of hours we would get a hard squall and it was "all hands on deck to take in sail and start the engine for awhile."

The 25-footer, Sea Bird, coming into dock at Gibraltar after her 3100-mile cruise across the Atlantic.

Tuesday was fairly pleasant, but the wind still prevented us from getting to the south as we wanted. Fred and I went in swimming in the warm water in the morning. Two steamers passed during the night. Wednesday was a repetition of the day before, with the same old rain and wind squalls all night and sunny days, with clouds hanging all about the horizon. We went in swimming again. Three steamers passed during the night, but too far away to sight. Thursday we passed a bark becalmed but too far away to speak to her. During the night a ship passed us close aboard, but they could not understand our language.

We had begun to work pretty well to the eastward now and were making fairly good runs during the day, but the nights were the same old story, rain, wind, reef and shake out, lower everything and then start the engine. We discovered that salt had gotten into one of our drinking water tanks so could only use it for washing. We had plenty of water, however, so this did not worry us.

Friday morning, about 4:30, we had the hardest squall so far in the trip. The wind blew about 60 miles an hour and it drove the rain with terrific force. I was turned out of my bunk to help get all sail stowed and the rain cut like a knife. We drove off before it under bare poles, and while I was struggling to get stops on the mizzen the sea picked up a loose piece of board on deck, and one end hit me a fierce crack on the left eye, giving me a beautiful "shiner."

It cleared after the squall and the wind came fair and we made a fine day's run. Friday night was fine, the first of the trip, but the next day paid us back. We ran into a succession of squalls with rain, until finally one broke that the skipper estimated not less than 90 miles an hour. Without a rag of sail set it drove us flat on our beam ends. You ought to have seen Fred and the skipper come scrambling up through the hatch. I got her off before the wind, and without a rag of sail she traveled like an automobile It blew so hard that it flattened the sea out till it was like a lake. You could not see 50 feet for the rain and dull yellow murk. The spray blew along the top of the water like a cloud of steam. It was over quickly and then the sea got up fast. The Old Man was pretty well used up, so Fred and I drove her to the southward all night, under her engine, jib and jigger trying to get out of the stream. Continuous storms passed over us all night.

Sunday the weather came fine again. We made a good run to the eastward and got pretty well dried out. That night we had the first trouble with the ignition which has been bothering us more or less ever since.

Monday and Tuesday were without incident, with good easterly runs during the day and more or less squalls and engine running during the night. At midnight Tuesday the wind began to freshen rapidly and the sea make up, and by 6 o'clock Wednesday morning we were hove to in a southwest gale. The wind and sea seemed to moderate somewhat as the sun got up, and we swung her off before it and ran until 2:30 under jib and jigger. I shall never forget that run. The seas were like mountains chasing us, heavy and broken. We kept oil dripping from a can astern and kept the cabin closed up. Every once in a while one would come aboard and fill the cockpit. At 2:30 it became too hard a strain on both body and mind, and we swung her into the wind and put out our sea anchor.

Such a change! She rode to the anchor like a vessel in a harbor, climbing up over the big mountain of water as easily as a duck and scarcely shipping a drop. We got the stoves going and dried out the cabin and I stewed a mess of prunes. We lay there until 3 p. m. Thursday, when the wind began to moderate and the sea go down somewhat, so we took in the drag and ran before it until 7 p. m., when we anchored again, as we did not want to risk running before the high seas in the dark.

Friday the gale moderated gradually and we drove her all day with the sea slowly subsiding. The skipper had an attack of too much bologna eaten every half hour, and could not take his night watch, so Fred and I divided it between us.

Saturday and Sunday were fine days. We ran into a school of porpoises Sunday, and they played about us for an hour. Fred took several pictures. Monday and Tuesday it blew hard from the south, but we kept going under double-reefed mainsail. Wednesday the wind went to pieces, and we ran with the engine for 19 hours. At 4 a. m. we sighted Corvo and Flores dead ahead, and by noon were close under the shores of Flores. Such a grand sight as these islands are nothing but extinct volcanoes, rising straight out of the water 2,500 feet in the air, with their tops in the clouds. The rock formation is wonderful, deep crevices and precipices and masses of broken rock everywhere. Tiny white villages nestle under the cliffs like toy houses, each with a little church and mission.

Half way down the shore we met a rowboat manned by six fishermen. Two of them spoke English. As they came alongside we gave them tobacco, some novels and papers. They gave us a fine fish, which was a welcome change of diet. It was very light all night and yesterday, which was mighty disheartening with only a little over 100 miles to Fayal to go. We got a breeze this morning, and came along in good shape, and are now, at 5 p. m. standing toward the harbor about three miles away. If we can get in before the port closes I will get a cablegram off to-night.

Monday afternoon.—Well, we struck a head tide and did not get in until 9:30. They sent a pilot boat out for us, and she guided us in. They set off a lot of fireworks in our honor, but we did not know they were for us until the next day. The doctor came aboard at 5 a. m. Sunday and gave up "pratique." A big whale boat towed us into the mole or public dock, and a crowd was already on hand. One of the first to greet us was an Englishman named Dalrymple from the cable office. He had a clipping with an account and picture of our start from Pawtuxet. He told us we were not expected for a week or ten days yet, and when we were sighted the day before they were unprepared for us.

This town has practically no foreigners except the cable office employes. There are about 15 Germans and 25 Englishmen at the cable office, and the way they took us in is something never to be forgotten. We landed Sunday morning about 8 o'clock, and the consul took us up to the hotel. We had a wash and breakfast and had hardly finished when Mr. Dalrymple of the Eastern Cable Company came after us with a carriage and took us to his house and then for a drive up on the volcano. When we got back Mr. Keating of the Commercial Company came after us and took us to their quarters.

The boys in the Commercial Company insisted that we were to be their guests as long as we stayed here. They import all their food from England and live beautifully, and you can just imagine how real English home food tasted. Fred and the Skipper slept at the cable company quarters Sunday night while I slept aboard.

Monday we hauled the Sea Bird out to fix a leak, and I took the engine to pieces for some repairs. In the evening we went to a bakery or café and had tea, and cake with the boys. This morning I spent in the cable building looking over the plant and having some electrical work done by their expert, a Mr. Cameron. After lunch about 10 of the boys went down to the boat with me and we took them all for a sail and they took a lot of pictures of the boat and crew and the whole party. This evening the Commercial boys gave us a dinner at their quarters and invited in some of the boys from the other companies. We had a fine dinner, and I am finishing this in the cable office with Mr. Keating, who is on duty to-night. We shall sail at 7 in the morning for Gibraltar.

THE SECOND LETTER.

Thursday, July 6.—I am going to write you a few lines each day, if the weather permits, until we get to Gibraltar. The mails are so poor from Fayal that you may get this before my first letter. We got away from Fayal at 7 a. m. yesterday. There was quite a crowd to see us off, including all our English friends, among whom were James Dalrymple, of the Eastern Cable Company; Patrick Keating, G. M. Sterling, E. Cameron, E. O. Reardon, F. Moore, R. Bubb and R. Bishop, of the Commercial Cable Company, who entertained us so lavishly at Horta. They certainly did themselves proud, making us presents of wine, cigars, a lot of fine English canned goods which they import for their mess, Oxford sausage, marmalade, tea and peas. They also sent two cooked chickens and we bought an additional stock of bread, cake, crackers, butter and a bunch of bananas. There was practically no wind, so we got under way with the engine and ran under power for 48 hours. We made 95 miles in that time and are just dropping the last of the Azores—Terceira—out of sight astern.

We went through the St. George Channel and had wonderfully beautiful views of Fayal, Pico, Graciosce, St. George and Terceira, with their craters shrouded in white vapory clouds, the deep gorges and rugged cliffs, tiny villages nestling among the hills and every foot of land that is tillable covered with corn, grapes or wheat. The flowers are beautiful. Geraniums grow wild and as high as your head. Every road is completely hedged with hydrangeas in full bloom and the green of the fields and the rich brown of the volcanic rock and the dazzling white of the houses, with their red-tiled roofs and light green window sashes, make it seem unreal and like a picture on the back drop of a tropical scene in a theater. We passed a lot of native boats chasing whales yesterday. We passed a small trading schooner with a lot of passengers from Terceira for Fayal and you should have seen them stare.

In another hour we will again be out of sight of land. Cape St. Vincent is about 650 miles away and with good weather we should pick it up in a week. If we make a quick trip we will run into Cadiz for a day on the way down the Spanish coast to Gibraltar.

Our meals the last 24 hours have been as follows: Yesterday morning breakfast—Oxford sausage, rolls and coffee; luncheon—cold chicken, rolls, jam, cakes and tea; last night's dinner—steak, boiled potatoes, boiled onions, rolls, coffee and tinned peaches; breakfast this morning—oatmeal, omelet, rolls and coffee.

Friday, July 7.—The wind held very light all day yesterday and it was like sailing on Narragansett Bay in a calm. We passed several whales, two or three schools of porpoises and several octopus. The wind fell altogether at sundown and I started the engine. I slept from 4 to 7, then got up and got breakfast, consisting of oatmeal, bacon, eggs, hashed brown potatoes, coffee and rolls. Fred is sick and did not eat anything. As soon as I got the dishes washed I went to work on the engine and just finished it at noon. It is running well now.

Our run was about 90 miles from yesterday. It has been a pretty slow trip so far, as there has been no wind since we started, but we cannot complain, as it is dry and comfortable, only a little hot in the cabin with the engine running. I find it so when I am cooking.

Saturday, July 8.—We got a fairly good breeze on my watch yesterday afternoon which has held ever since. Two steamers passed us yesterday afternoon, one going each way, the first steamer we passed in the daylight on the whole trip. Unfortunately we were about three miles too far to the south to speak to them. Supper consisted of English canned sausage, rice, boiled potatoes, tea and cake. Breakfast this morning, fried potatoes, omelet, coffee and rolls.

Sunday, July 9.—Practically nothing of interest today. The breeze held fairly steady all the rest of the day and all night. The weather has clouded up and threatens rain—the first cloudy day in a couple of weeks. The supper last night consisted of baked beans, rice, mashed potatoes and canned peaches and breakfast this morning, corned beef hash, boiled eggs, coffee and rolls. We passed through a dead sea yesterday and did not see any life of any kind until just before sundown, when a big school of porpoises surrounded us for a few moments.

Monday, July 10.—Just a month since we started, and it has been a long month. Yesterday afternoon it cleared off and the wind freshened. We are making the best day's run so far from Fayal and should log about 150 miles noon to noon. We are now about 475 miles from the Spanish coast and should sight Cape Vincent Friday night. Fresh food is about all gone and we are back on canned rations once more.

Tuesday, July 11.—This is a rotten day. Yesterday afternoon turned out fine. The wind freshened to a fine whole sail breeze. We set the square sail and mizzen staysail in addition to her jib, main sail and mizzen, and she was a picture tearing off a good six miles an hour. Toward night the sea began to make up rather ugly and the wind came in pretty heavy. We took off the light sails and at dark put a reef in the main sail. It clouded over dull and greasy and blew quite hard all night with a broken short sea. The day is dull, with not quite so much wind, but the sea still running. We could not get a sight this morning, but dead reckoning put us 360 miles from Cape Vincent.

Wednesday, July 12.—Cloudy and dull. The wind went to pieces late in the afternoon and we started the engine. We wish we could get a sight and determine our correct position. Dead reckoning puts us about 250 miles off Cape St. Vincent. The skipper says we are in a cloud factory, and I guess he's right.

Thursday, July 13.—It cleared off finely yesterday noon and we got a sight which placed us 320 miles west and 85 miles north of Cape St. Vincent. Fog shut in at sundown with light southwest winds. During my watch on deck the wind changed north and the fog blew away. We are making rather a slow run, however. This morning the sight places us 170 miles west of the cape. With good luck we should pick it up to-morrow afternoon. It is a beautiful day, warm and sunny. We passed between two steamers at 8 o'clock and ran so close to the Lyr of Bergen that we hailed her. She was bound for England with a deckload of mahogany from Africa. We were surprised to see how she pitched when we were making such easy weather of it. We asked them to report us, but we will probably be in Gibraltar before she gets in.

Friday, July 14.—Hove to in easterly gale only 70 miles from shore. The old Atlantic certainly handed us a fine lemon to wind up on. Yesterday was beautiful all day, but there was no wind. The night was fine with a light headwind, but as I overhauled the engine yesterday it was running like a clock and making good time and at 8 a. m. when we got a sight it was a beautiful calm morning. By 8:30 it was blowing a gale right off shore, with a nasty sea, but as we could not make against it there was nothing to do but heave her to with her head to the wind and let her drift. If the wind will let go for 10 hours we can get her in under power within 25 or 30 miles of shore, where the sea will be much smoother.

Saturday, July 15.—Well, we have made Europe at last. We drifted, hove to yesterday until noon. The skipper divided up his bag of money, and we played poker all morning, but he won it all back. The wind and sea moderated toward noon and after lunch we got under way and beat in towards shore. In the night the wind shifted a little, so we could just lay the course. In my watch, about 3 a. m. I picked up five steamers at one time, so we knew we were close in. As soon as it grew light we could make out the land. Mountains seemed to place it as Cape Vincent. We overhauled a small Portuguese schooner with a load of rope. I hailed him in Spanish and he told us that the land was the cape. He was bound for Genoa. A constant procession of steamers passed outside of us. The weather is very muggy and cloudy, with the wind dead ahead for a stretch of 180 miles down the Spanish coast.

Sunday, July 16.—Well, we had a great day yesterday that repaid us for all the hardships and bad weather in the past. The wind was dead ahead all day and we had to tack and only made about 40 miles, but as we tacked back and forth between the shore and the steamer lane it was a wonderful sight. Over 60 ships a day passed Cape Vincent and there is not a time when you cannot see half a dozen of every nationality except American. The Portuguese coast line is wonderful, with sheer cliff made by glaciers, with the most beautiful coloring and shapes. Great cuts and tunnels and sandy beaches in between each headland, while behind the Pyrenees loom up from 1,500 to 3,000 feet. On every hilltop is a watch tower, where they used to watch for pirates. Fred took snapshots of everything. The light at Cape St. Vincent is in the center of a monastery and located on a jutting cliff 250 feet clear above the water. Prince Henry, of Portugal, endowed the monastery about 1400 A. D. with the proviso that the monks should always keep the light burning.

We passed everything under sail in sight beating to windward with our engine running. I guess they wondered what kind of a speed machine we had, as the exhaust could only be heard a short distance. Last night was a beautiful moonlight night and during my watch 12 steamers passed. We are now out of sight of land again, sailing across the bight between Cape St. Vincent and Cape Trafalgar and will be 40 miles off shore in one place. The distance of Gibraltar from St. Vincent is 180 miles and we have come about one-third of the way. The wind is more favorable, but very light and the engine is doing most of the work. I expect to run out of gasoline in a day or so; hope we will get some wind. We should be in Gibraltar to-night or Tuesday morning, about four days behind schedule. It is a fine, bright morning and should be a lovely day.

Monday, July 17.—Yesterday was a rather monotonous day, as we were out of sight of land. We kept track of the number of passing steamers and counted 65 in 24 hours. The wind was light all day, but favorable and we made a fairly good run. At 8 a. m. this morning we had Cape Trafalgar in sight, about 55 miles from Gibraltar. If the breeze is good we should get in to-night. We see the coast of Spain and the north coast of Africa.

5 p. m.—We are just entering Gibraltar. We have crossed the Atlantic in spite of the wise guys.

From Motor Boating Readers.

A Department for the Exchange of Ideas and the Discussion of Questions of General Interest. Editorial Opinion on a Number of Questions Submitted by Readers of the Magazine.

MoToR BoatinG's columns are open to its readers, not only for asking questions, but for placing before other readers ideas, results of experience, opinions, etc., that should be interesting or helpful to them; but the editor will not, of course, be responsible for any opinions expressed or statements made in such communications. The name and address of the writer must necessarily be given in every case to make an answer by mail possible (no anonymous contributions will be considered for publication), but names will be omitted in publishing the letters and answers where desired, in which case it is desirable that initials or other distinguishing signature be appended. Through the correspondence department readers of the magazine may be of direct aid to one another in solving the problems of motor boating.

Corrosion and Its Remedy.

To the Editor of MoToR BoatinG, *Sir:*—

Will you kindly inform me how I can prevent my 1-inch Tobin bronze shaft between stuffing box and bronze propeller (distance of 2 inches) from eating away. The ⅜-inch set screws on my propeller have also eaten away flush with the hub of the propeller in two months.

This is my third shaft in six years that has eaten itself away in like manner.

GEORGE F. MAIER, Maspeth, L. I.

[The following extract from an article "Electrolysis and Corrosion," which appeared in the October, 1910, issue of MoToR BoatinG answers your inquiry and suggests a remedy.—ED.

"The fundamental law regulating all corrosive action, which always holds good when corrosion actually takes place, is that if two dissimilar metals are placed together in a fluid, capable of exerting the slightest corrosive effect on either of them, one of the metals is invariably preserved at the expense of the other. The contact between the two metals may be direct, as when they actually touch each other, or by means of some metallic connection, such as a propeller shaft. Further, it does not depend on accident or local conditions which metal will be acted on, for that metal which has the greater tendency to dissolve, and which is therefore capable of replacing the second metal in its solutions, is always the one to corrode. For instance, zinc when dipped into a solution of copper sulphate will pass into solution as zinc sulphate, the copper being replaced and precipitated, and therefore under all circumstances when copper and zinc are contacted in seawater, it is the zinc and not the copper which will undergo corrosion.

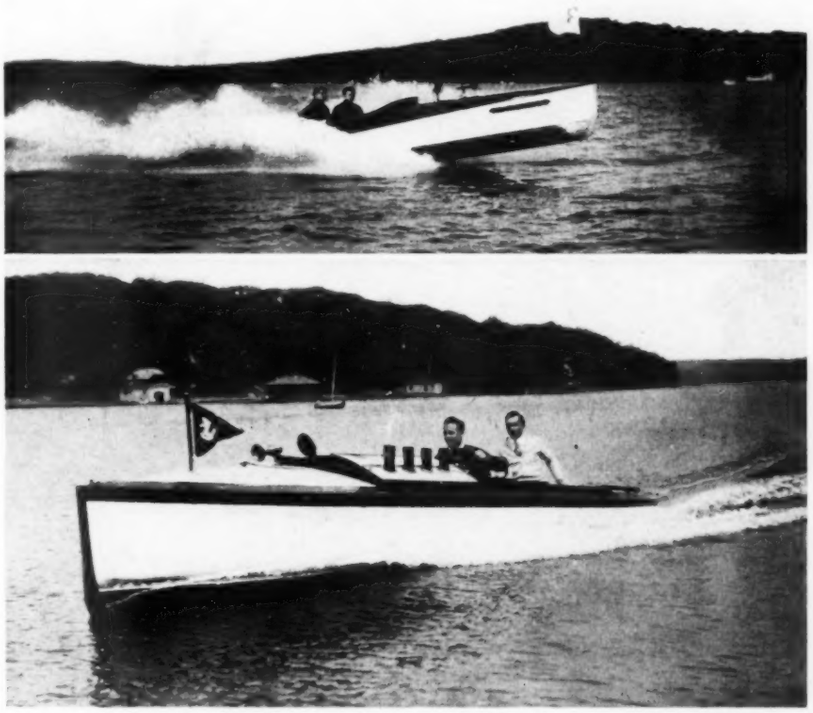
* * *

"It is now very generally admitted as the result of recent researches by a number of investigators that a state of stress and strain in metal invites rapid corrosion, it is natural that the regions of maximum corrosive action in these parts should tend to coincide with regions of maximum strain.

It is well known that the severest duty a propeller shaft undergoes is at the point where it is supported by the stern bracket, for here the wear is entirely on the lower face of the bearing. This downward thrust is due to the pressure on the blades of the propeller being greatest when they occupy their lowest position, so that the center of pressure on the propeller as a whole is situated below its axis of revolution. The shaft as it revolves therefore sustains a bending moment of which the direction in space is fixed. This is virtually the effect to which we subject a rod when we bend it backward and forward against a support in order to break it and it is therefore not surprising that in a majority of cases it is just behind the stern bracket bearings that corrosion followed by fracture occurs.

* * *

"The fact that corrosive action proceeds chiefly during the many hours that a boat is at anchor rather than during the comparatively few hours during which she is under way, does not seem to have been taken advantage of to the extent that it might. It would be quite practical when a boat is moored to hang from the propeller, shaft and skeg, a mass of zinc or soft iron, the immediate attachment being effected by broad strips of copper similar to the busbars of an electric furnace. This would prevent all fouling of the submerged surfaces by the disintegration of the protective metal and the only trouble necessitated would be the removal of the attachment when the boat was in use."]



Peter Jan Junior, probably the fastest boat on Lake Hopatcong, and Dixie Junior, another Hopatcong flier.

Regarding the V-Bottom.

To the Editor of MoToR BoatinG, *Sir:*—

In your February, 1911, issue of MoToR BoatinG, on page 34, you published the lines and sections of a V-bottom boat. On page 11 of your March, 1911, issue you published an article on "How to Build a 22-Foot V-Bottom Boat," giving the sections, etc., and full directions for getting out the boat. The February boat was of four feet beam, while the March boat was of four and one-half feet beam. The February boat has taken my fancy and I have enlarged the sections to working size. I intend soon to build a boat from them, but instead of setting the moulds two feet apart, as in the original boat, will place them two feet four and one-third inches apart, making the boat twenty-six feet long by four feet beam.

I spoke to H. Cole Estep when he was in Dubuque at the M.V.P.B.A. regatta regarding lengthening the boat in this manner and he says he does not think it ought to make the boat cranky. I did not think, however, at the time, to mention the manner in which the March boat is built, and I am in doubt whether it will be advisable to employ the "mould and ribband" construction, in the elongated February boat. I had thought it might do to employ both methods, setting the small ribs of the February boat between the moulds of the March boat, but this would make a great deal of extra work.

Will you kindly advise me on this subject, and also tell me what is the extreme weight of engine such a boat ought to carry and what is the extreme limit forward for placing the flywheel of the engine.

FRANK R. MORRISSEY, Dubuque, Iowa.

[In enlarging the plans of the 22-foot V-bottom boat, which appeared in the February issue, we would greatly recommend keeping the original proportion, *i. e.*, enlarging the beam as well as the length, although, if the boat is to be used for racing or fast runabout service entirely, the dimensions you propose should prove satisfactory, with the exception that she may be a little harder to handle.

As to the construction, we are inclined to recommend the ribband method used by Mr. Bacon in the V-bottom which appeared in the March issue. Using a combination of both would be rather complicated and difficult to build, and we do not believe the result would warrant the greater effort.

As to the motor, we should say roughly that eight feet from the bow would be about the position of the flywheel, and we believe that a motor of 35 h.p. or about 450 pounds in weight would be just about the upper limit.—ED.]

Nameless III's Partially Submerged Propellers.

To the Editor of MoToR BoatinG, *Sir:*—

Will you please explain the unusual position of the propellers of Nameless III as illustrated in the August issue of MoToR BoatinG? Apparently only the lower part of the wheel comes in contact with the water below the hull. Also, why aerial rudders?

MoToR BoatinG is absorbingly interesting, and every issue is eagerly looked forward to.

F. J. Potter, Trinidad, Wash.

[The partially submerged propellers of Nameless III were employed to eliminate the resistance caused by dragging through the water the usual rudder, strut, shaft and propeller hub. At the speeds attained by the hydroplane today, the resistance caused by these parts constitutes a very great percentage of the total resisttance, and offers about the only field where resistance may be further reduced, as both skin friction and wave making resistance have already been reduced practically to the limit.

By mounting the propellers as shown in the photograph, only the efficient part of the blade enters the water, as the hub is considerably above the line of the bottom. It was found in this particular case that the aerial rudders were a great success, but the propellers gave some trouble. They furnished a lot of valuable data, however, and the Atkin Wheeler Co. are to build another boat utilizing the same principal with modifications. The 25-footer Nameless II, will therefore be entered in the British International trials instead of the 19-footer shown in the last issue.—Ed.]

To Determine Propeller Dimensions.

To the Editor of MoToR BoatinG, *Sir:*—

I own a thirty-six-footer, seven-foot beam, equipped with a Fay & Bowen two-cylinder two-cycle engine, 5½ x 5½, which is supposed to develop fifteen horsepower or more at 450 r.p.m. The boat is equipped with a reversible propeller, which has proven unsatisfactory, as it is impossible to get the proper pitch. The boat is supposed to have two speeds forward, but on the first speed the engine races at about 600 r.p.m. moving the boat at about three miles an hour, and on the second speed the pitch is so great that the propeller churns up a great deal of water without getting enough speed, as the best I can get out of the boat is about eight miles an hour. Most of the power is misdirected and the resistance is so great that the engine will not do better than 300 r.p.m. I intend to install a solid propeller with some suitable reverse gear, and want your advice as to what size and pitch propeller would be most suited to my boat.

It is my opinion that a twenty-four-inch wheel with a thirty-two pitch would be about right, but I shall be guided entirely by your advice in the matter.

Fulton M. Brylawski, Washington, D. C.

[Following the method proposed by Mr. Keith in his article in the June issue of MoToR BoatinG, we have calculated the actual diameter at 24.8 inches and the pitch at 33.7 inches. The nearest standard size would probably be 24 in. x 34 in. As they may be of interest the calculations are as follows:

Substituting in equation (1),

$$M = 10 \times \frac{\sqrt[3]{36 \times 15}}{7} = 10 \times \frac{\sqrt[3]{540}}{7} = 11.6$$

From equation 2, therefore,

$$r = \frac{450}{(11.6)^2} \times \sqrt{\frac{15}{11.6}} = 3.8$$

Reading from Table 1, therefore, the slip equals 19% and the efficiency equals 72%.

From table (2), K = .96 and pitch ratio = 1.36

Therefore diameter $= K \frac{M}{R} = .96 \frac{11.6}{450} = 24.8$ in.

And the pitch $= 24.8 \times 1.36 = 33.7$ in.—Ed.]

The Bank Dory.

To the Editor of MoToR BoatinG, *Sir:*—

Will you kindly advise where I can purchase a set of plans for an 18-foot dory? I want the original bank dory with none of their so-called improvements. I want it planked smooth and want to use 6 h.p. engine if it wouldn't be too much power for this class of boat.

F. M. Harris, Geneva, N. Y.

[As far as we know, the bank dory was never designed, but is a simple evolution to meet the conditions on the Grand Banks and Georges. Although built by many of the boat builders along the coast, there is very little variation in the lines, and about the only way to do if you are to build one yourself is to take measurements from one already built. We would not advise using an engine of more than 4 h.p. in an 18-foot dory. This should be of the medium or heavy-duty type.—Ed.]

Keith's Propeller Article.

To the Editor of MoToR BoatinG, *Sir:*—

As an interested subscriber of your very creditable publication for some years, I will ask you to be kind enough to send me a proof or print of the two charts designated as figure 1 and 2 on page 36 of your June issue, appearing in the article by Mr. W. H. Keith. I desire to paste these in a book containing various information relative to motor boats and automobiles, which I keep for ready reference, and do not care to destroy the magazine itself.

Regarding the article of Mr. Keith's I might state that it much impresses me, but the definite value of the co-efficient C in his formula makes the result of the calculation of such formula correspondingly indefinite.

The difference of two in the co-efficient C as applying to runabouts where the length over-all divided by the extreme beam is equal to from five to seven gives too great a difference in the propeller dimensions. I presume if one knew the approximate miles the boat should make this indefiniteness would not be so important.

There is one vital point that impresses me, and that is, two boats may have the same length and beam which would give the same quotient by dividing the length by the beam, but in one boat the extreme beam may be a few feet from the stem and in the other many feet from the stern, and the former boat, because of that fact, would be much slower than the latter boat even though of the same length, beam and h.p. and would therefore require a much different propeller.

W. J. Andrus, New York City.

What H.P. and Propeller?

To the Editor of MoToR BoatinG, *Sir:*—

I have a boat 22 feet over-all, 5 feet 6 inches beam, with a draft of 16 inches at the bow and 26 inches at the stern. From amidships aft the boat is quite flat on the bottom. It is powered with a 2-cylinder engine with a bore and stroke of 3¾ x 3½. Will you please tell me what power the machine will develop running 600 to 800 r.p.m. and what size wheel I ought to use to get the most speed and about what that speed ought to be?

S. H. Winchester, Corinna, Maine.

[Using the formula $\frac{A \times L \times N \times C}{K}$, in which

A = area of one cylinder in square inches,
L = length of stroke in feet,
N = revolutions per minute,
C = number of cylinders,
K = 1,000 for 4-cycle, 750 for 2-cycle motors,

for a two-cycle motor we obtain 5.2 to 7 h.p. using 600 and 800 r.p.m. or, let us say 6 h.p.

For a four-cycle motor we obtain 3.7 and 5.2 or, say, 4.5 h.p. as an average.

If your engine is of the two-cycle type, therefore, a 14 x 21-inch propeller would be most suitable, and if of the four-cycle a 14 x 14 or 12 x 18-inch wheel would be best. With the former combination you should obtain from 8 to 10 miles per hour, and with the latter from 7 to 8 miles per hour.—Ed.]

A thirty-two foot hydroplane owned by Mr. J. H. Hayden, Alexandria Bay, N. Y., and equipped with a 130 horse power Sterling engine.

Novel Method of Planking.

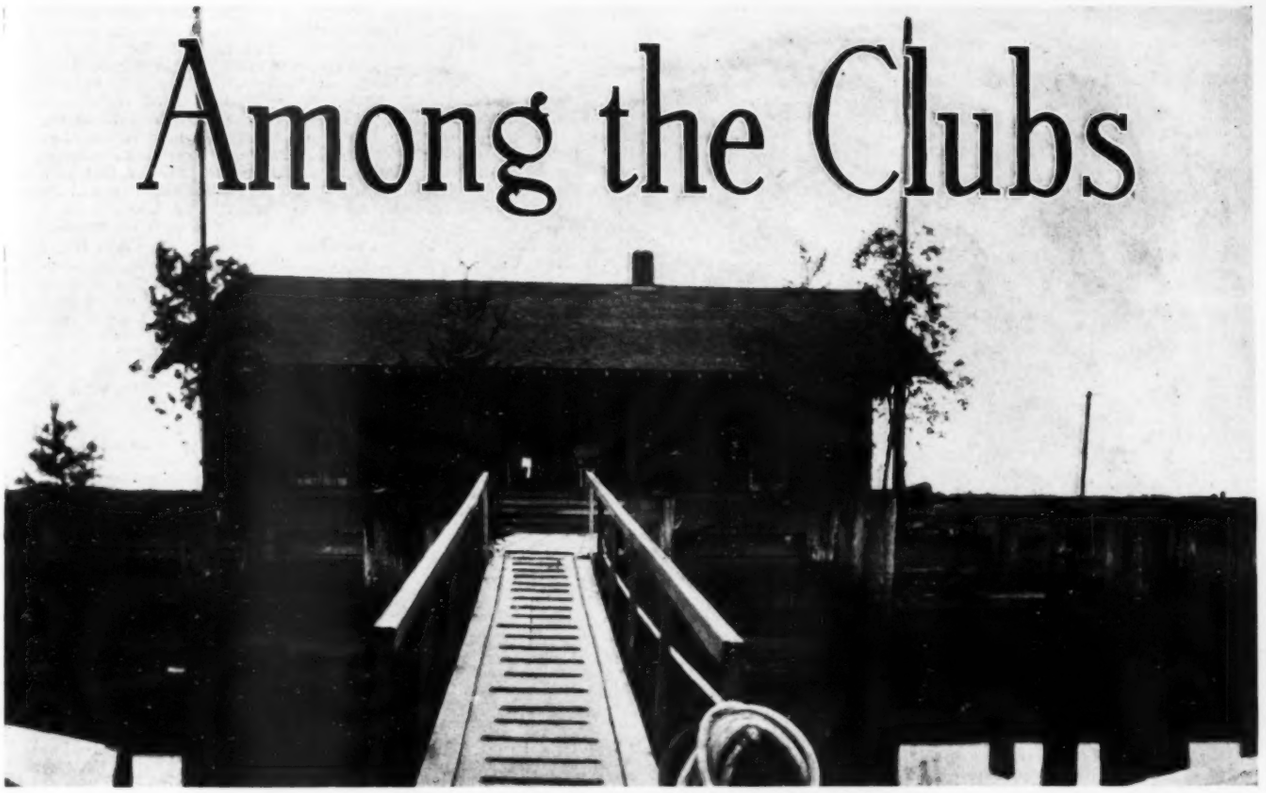
To the Editor of MoToR BoatinG, *Sir:*—

I am planking a 26-foot boat with narrow strip cedar planking, hollow and round, about 1⅜ inches wide, and am edge-nailing it with copper nails which go through two planks and into the third about ¼ in. The planks are riveted to the frames with copper rivets. This planking runs to just below the water line from the sheer strake. Under that to the keel she is planked with wide planks. One boat builder here makes all his boats that way and claims they give excellent satisfaction. Another tells me he would not have a boat planked that way; says she will open up. I am using perfectly dry white cedar and white leading every joint and putting a piece of plumber's lamp wicking between and then edge-nailing before I rivet. What is your opinion? Wilbert Evans, Gloucester, N. J.

[We see no reason why this method of planking should not be perfectly satisfactory. The hollow-and-round edge-nailed system and regular Carvel method are both satisfactory and there is no reason why the combination you speak of should not be equally so.

The edge-nailed system, either flat or hollow and round, is apt to make a better looking job in the hands of the amateur builder, and it is not customary to insert anything between the planks but white lead, as the natural swelling of the wood prevents leakage.—Ed.]

Among the Clubs



Club house of the Tacoma, Washington, Yacht Club.

Detroit Motor Boat Club, Detroit, Mich. The second annual regatta of the Great Lakes Power Boat League was held on August 4th and 5th over the course of the Detroit Motor Boat Club and under the auspices of that organization. It was distinguished by the performances of Kitty Hawk II, owned by Lee Counselman, of Detroit. On the day before the race this boat covered 5¾ miles at an average speed of 34.9 miles per hour. In the free for all race for the championship for the Great Lakes Power Boat League she captured the Melville cup for the best time made during the regatta. Her elapsed time for the 28.75 miles, which the five lap course totalled, was 52 min. 21 sec. The Intruder II, the only other boat to finish, was timed in 1:04:14. Sand Burr II broke a strut on the third lap and withdrew. In the other big event, the handicap race for cruisers, P. C. Jones' Nomad II, of Toledo, won in 1:35:21. Photographs of the contesting boats will be found on page 15.

SUMMARY:

Free-for-all race for the championship for the G. L. P. B. L. Course 28.07.05 miles.

	Elapsed Time.
Kitty Hawk II	0.52.21
Intruder II	1.04.14
Sand Burr II did not finish.	

Handicap for cruisers. Course 20 miles.

	Elapsed Time.
Nomad II	1.35.21
Kalonah II	1.36.16
Cincinnatus	1.41.03
Berkshire	1.43.26
Crescent	1.44.18
Puritan	1.46.28

The Lake Champlain Yacht Club, Burlington, Vt., held, on August 1, one of the finest regattas ever held on the lake. In spite of the fact that the club house was a mere shell, having been practically destroyed in a recent fire, the numerous events were smoothly run off with but one serious mishap to mar the occasion. This was a fire on Commodore Witherbee's yacht, which he was to enter in one of the races. The boat was speedily set on shore, where the fire was extinguished by the motor truck of the fire department. In the races many boats from a distance participated, and the predominance of motor boats over sail indicates the increasing popularity of the motor boat on Lake Champlain. The regatta was terminated with a delightful ball on the roof garden of the Hotel Vermont.

The National Motor Boat Carnival to be held at Huntington Bay, Long Island, September 4th to 9th will be enlarged by the addition of a number of new races. There will be a race for cruisers to be known as the Stratford Shoal-Larchmont race. Some of the other races will be run without handicap, and races of some description will be held every morning and afternoon, so that the interest of the spectators will not be permitted to lag. Owing to the postponement of the British International Races, a re-arrangement of the carnival program has been made, whereby the Internationals will be run on the first two or three days of the carnival, as well as some of the regular carnival events. The race committee of the Motor Boat Club of America, under whose auspices the carnival is to be held, consists of Henry R. Sutphen, chairman; James A. Blair, Jr., Victor I. Cummock and Ira Hand, 29 West 39th Street, secretary of the race committee.

The Colonial Yacht Club, New York City, held one of the most interesting and successful regattas in its history on July 29. The race to Rockland Light and return furnished a thrilling finish, for the two leaders crossed the line but a minute apart, which in a race over a course 47 miles in length is remarkable. The leaders which furnished the thrills were Anna V, owned by C. Von Eulin, winner, and Retta D, owned by C. Dalton. From Inward to a point near the finishing line, the two boats were practically bow to bow. Lida M, owned by T. C. Holland, finished third. Fourteen boats started and all finished in good condition:

Pos.	Name and Owner.	Handicap.	Elapsed Time.
1	Anna V., C. Von Culin	1.14.21	5.01.51
2	Retta D., C. Dalton	2.18.19	6.06.49
3	Lida M., C. P. Holland	1.12.21	5.08.23
4	Virginia, H. M. Betz	0.55.35	4.54.35
5	Arnart, A. J. Bender	1.50.35	5.59.58
6	Amy II, M. H. Dyckman	1.05.04	5.31.04
7	Merry, W. Murphy	1.27.58	5.55.43
8	Utopia, L. D. Canfield	0:52.04	5.21.20
9	Rosa, S. Cohn	0.22.39	4.52.12
10	Canisteo, N. J. Baker	0.39.41	5.17.06
11	Lady Betty, H. J. Russell	0.33.43	5.19.15
12	Eliza, J. W. Hughes	1.18.26	6.08.02
13	Alma, A. H. Merry	Scratch	5.01.36
14	Isis, C. C. Hunt	2.02.19	6.36.42

A Handicapping Suggestion.

Mr. L. J. Monahan, of Oshkosh, Wis., suggests the following special system of rating for handicap motor boat races, governed by A. P. B. A. rules, which he says has been used in recent local races with the best of success: Appoint an estimating committee of three who are reasonably familiar with the approximate weights of various sized motor boats, and permit each member to make his estimate of total weight, separately. Then add together and divide by three, to give the average weight. This result can be modified, if deemed necessary, by mutual agreement of the three members. After determining the weights, the results are to be handed to the measurer, or one appointed to calculate the various ratings, as per A. P. B. A. formula. This system of rating he claims should be more satisfactory than the old method of measuring the midship section, which at best is no closer than an estimate. The plan also has the merit of saving time and labor for the committee, and the whole work can be completed an hour before the race, so it will not be necessary to engage the boats beforehand.

The Long Beach Motor Yacht Club, Long Beach, N. Y., held its first annual speed races in July. Results were as follows:

Class 1—High speed handicap; course 37 miles.

Edith II, A. E. Smith	1.00.55
Rocket, H. B. Simmons	56.51

Class 2—Semi-speed handicap; course 20 miles.

Rowdy, D. J. McFail	20.23
Mildred V., J. C. Wrightmaur	21.03
Sadie L., G. E. Lush	28.12

The North Shore Yacht Club, Port Richmond, N. Y., is a new organization. Fifty members are now upon its roll, and the club's headquarters are now located at the Faber Club House, foot of Elm Street. Meetings are held on Thursday evening. The officers of the club are: Commodore, John Milnes; vice-commodores, Henry Schneider and Fred Jones; corresponding secretary, R. Pickard; financial secretary, H. Bishoff; treasurer, Frank Barranco; fleet surgeon, Dr. Myron Morris.

The Washington Park Yacht Club, Providence, R. I., held a very successful cruise about Narragansett Bay the last week in July. Among the places visited were Wickford, East Greenwich, Newport and Tiverton. At Newport Commodore Caswell, of the Newport Yacht Club, arranged some special features of entertainment for the visitors.

Kansas City Yacht Club, Kansas City, Mo., announces a series of power boat races under its auspices for October 7th. They will be held on a course in the Missouri River and will be the first ever given by this club. Some of the finest and fastest boats in the country

will undoubtedly compete, among which may be mentioned San Burr II, Scamp III, Missouri III, Leading Lady, Pronto III and Arnold Pierce.

The Atlantic City Motor Boat Club, Atlantic City, N. J., is now formally organized and installed in the handsome club house of the new organization, located on Riverside Drive at Venice Park. The club was formally incorporated at Trenton, with the purpose of encouraging motor and sail boat racing and provide all kinds of amusement and entertainment for its members and guests. A regatta committee will have charge of the races and other nautical events held in connection with the Atlantic City carnival or water fete. The charter members of the club number about fifty. The club pennant is a blue triangle with narrow red stripes.

The Ocean City Yacht Club, Ocean City, N. J., held a very successful regatta early in August which was attended by a large delegation of visiting yachtsmen, including a number of commodores of other New Jersey yacht clubs. The power boat races held in connection with the regatta were very successful and extensive, there being eight different classes. The most interesting of these, perhaps, was the boys' power boat race for boys between the ages of nine and fifteen in boats up to 25 feet in length.

The Los Angeles Motor Boat Club, Los Angeles, Cal., first saw the light a year ago. It is a lusty youngster, however, and is doing much to promote the sport on the Pacific slope. It has been the ambition of its founders to have the finest club quarters and the best class of membership, as well as the finest racing and pleasure fleet on that coast. Mr. E. J. Louis is the club's commodore. As members of the Southern California Racing Association it expects to have a prominent part in insuring the success of the inter-ocean race of 1915 from New York, through the Canal, to San Diego.

The Manhasset Bay Yacht Club, Port Washington, L. I., held a motor boat regatta on Saturday, August 19th. The boats were divided into three classes, as follows: Class A, not over 35 feet on deck, unlimited power. Class B, not over 28 feet on deck and not over 40 H. P. Class C, not over 21 feet on deck and not over 15 H. P. The course was over Manhasset Bay for a distance of 8 nautical miles. The committee who had the affair in charge were J. W. Alker, William Gardner and A. W. Nilsson.

The Winthrop Yacht Club, Winthrop, Mass., has out a very attractive year book for 1911. The officers of the club are: Commodore, David M. Wiseley; vice-commodore, Harry W. Farquar; secretary, Charles G. Bird; treasurer, Jos. S. Devereax; fleet captain, Lawton J. Reed; measurer, Frank H. Byrne.

The Mahopac Boat Club, Lake Mahopac, N. Y., is a fresh water organization which was started about a year ago and now has a membership of about fifty. Their squadron consists of about thirty motor boats, mostly of small horsepower. Some of the boats are owned by ladies. The club is out for good fellowship and fun and have pulled off some very successful races this summer, each event being represented by a dozen or so entries. The club has lately passed a resolution to the effect that care be taken not to let the motor boats on the lake interfere with the angling. No boat is allowed to pass within 100 feet of a person fishing. This is a good resolution, which other fresh water organizations would do well to follow.

The Midget Squadron of Jamaica Bay, Bergen Beach, Brooklyn, L. I., held two racing events of interest on July 30. The race for the Mead Cup was held over a nine-mile course and was won by Dream. The club races were held upon a course of 11 miles, the entrants being divided into four classes.

Norwalk, Conn. The different yacht clubs located in the Norwalks and vicinity co-operated in holding a very successful parade of decorated motor boats on July 29th. The affair was a huge success and the contestants, who included nearly everyone who owned a motor boat anywhere in the vicinity of South Norwalk, received the enthusiastic applause of a large-sized crowd. Some very attractive and beautiful effects were obtained by the use of bunting and flags. The affair was ably managed by Commodore R. L. Luckey, of the Rowayton Yacht Club, who acted as grand marshal.

The Red Bank Motor Boat Club, Red Bank, N. J., has bought a house upon the Shrewsbury River front, which it will convert into a comfortable and attractive club house. The alterations will be extensive and the new club house will not be ready for occupancy till next April.

The Quincy Yacht Club, Quincy, Mass. The 1911 year book, just received, shows a membership of over four hundred, and a long list of yachts and motor boats. The book contains the usual by-laws, racing rules, etc., as well as a chart of the Quincy Yacht Club racing courses. The club's present officers are: Commodore, Ira M. Whittemore; vice-commodore, Henry S. Crane; rear commodore, Frank F. Crane; secretary, John O. Hall; treasurer, George S. Morse; measurer, Ralph E. Winslow; fleet captain, George H. Wilkins; fleet surgeon, Dr. F. E. Jones.

The Beaumaris Yacht Club, Beaumaris, Ont., recently gave on Muskoka Lake what was termed by spectators from various parts of the United States and Canada one of the most beautiful water carnivals ever held on this continent. Probably the largest colony of American cottagers to be found anywhere outside of the United States is clustered among the islands of Muskoka at Beaumaris. The yacht club has a membership of nearly one hundred enthusiasts. The annual regatta was held the middle of August and was attended by many notable visitors. The club's officers are: Hon. James Francis Burke, commodore; Col. A. B. Berger, vice-commodore; Thomas Hilliard, rear commodore; Raymond Hilliard, secretary-treasurer.

The Excelsior Yacht Club, Brooklyn, N. Y., will hold the following motor boat races during September: Saturday, September 9th, Stratford Shoal Light and return. open to cabin motor boats of forty feet in length and under, with a waterline breadth of not less than one-fifth of the waterline length, and regularly enrolled in some organized yacht club. Course 106 nautical miles. Sunday, September 10th, around Staten Island. Open to all motor boats of the open type, thirty feet and under, with a waterline breadth of not less than one-fifth the waterline length, and regularly enrolled in some organized yacht club. Course 35 nautical miles.

The Seaside Yacht Club, Atlantic City, N. J., has a somewhat novel idea by which it proposes to supply about the only feature now needed to make the resort a complete national place of recreation for all classes. The plan is for a new club house which will be a temporary home for all yachtsmen coming to Atlantic City, who may have entree through the medium of the hotels at which they are stopping. The exclusiveness of the present clubs at Atlantic City make them available only to their members and those who are members of other clubs. The plan of the Seaside Club met with more than ordinary favor from the hotels asked to co-operate. A building to cost in the neighborhood of forty thousand dollars is to be erected at the Inlet at the upper end of the island where it may be very conveniently reached by visitors stopping at the hotels. It is quite probable that with the moving to the new home the club will change its name to the Atlantic City Yacht Club. There will be several classes of membership.

The Robbins Reef Yacht Club, Bayonne, N. J., recently held a celebration in commemoration of its fifth anniversary. Commodore F. J. Muller gave a brief history of the club, and a number of other interesting features, followed by dancing, were provided by the entertainment committee. About 75 members and guests were present.

The Trenton Yacht Club, Trenton, N. J., has had its headquarters newly furnished in fumed oak, and it presents a very handsome appearance. A library has been installed, and the reading rooms and parlors have been made very attractive. The club's roster now totals 270. Invitations from the Wilmington Yacht Club to compete in a number of races under the auspices of that club, have been enthusiastically accepted. The club's annual outing will be held on August 27th, and a regatta is also in course of preparation.

The Newark Bay Yacht Club, Newark, N. J., whose headquarters are located on the Newark Bay shore, are planning for a carnival of aquatic sports, which will include a regatta to be held the latter part of August. The committee of arrangements consists of Commodore Ira Cauldwell, Vice-Commodore George Nice, and others.

The Oscawana Lake Boat Club, Peekskill, N. Y., held its second annual regatta and carnival on August 19th. The presence of a military band added much to the enjoyment of the occasion.

The Elizabeth Yacht Club, Elizabeth, N. J., elected the following officers at its annual meeting: Commodore, Walter Summerton; vice-commodore, Michael Beglan; rear commodore, Gustav Pein; treasurer, William Laurie; financial secretary, Benjamin Pyner; recording secretary, David Clark, and fleet captain, Louis Punz. At this time a flag was presented to William Wimmer as a mark of appreciation for his work in the interests of the organization.

Upper Saranac Lake, N. Y. Motor boating has eclipsed all other sports at this resort. Henry S. Graves, Jr., of New York, has installed a 200-h.p. engine in his 45-foot boat Eagle. Other fast boats on the lake include a new speed boat of 100 h.p. owned by C. U. Palmer, of Brooklyn; Ketchup, owned by Charles M. Daniel, and the fast boat of Adolph Lewisohn.

The Flushing Bay Motor Boat Club have filed articles of incorporation at Albany. The following directors were named for the first year: Henry Jost, Nicholas Schwartz, Jack Nelson, of New York City, and Jeremiah McCarthy, of Laurel Hill.

Wethersfield, Conn. A new boat club to be known as the Watermook Boat Club has been formed and incorporated by the following people of this town: Theodore W. Hannum, Edward B. Eaton, Edward H. Warner and Lawrence A. Howard. The object of this club is a laudable one and will be appreciated by people who frequent the waterways of Connecticut. In the words of the club, it is to "stimulate an active interest in the improvement of Wethersfield Cove as an anchorage, and in straightening and deepening the channel leading from Wethersfield Cove to the Connecticut River, also to co-operate with others in encouraging the general improvement of the Connecticut River."

(*Cont. on p.* 63.)

Relative Positions of Boats in New York to Camden Race.

Below will be found a table, compiled from the logs of the boats that took part in the New York to Camden Race of 1911, showing the times when each boat passed the different points along the course. By comparing the times recorded, the relative positions of the boats at each of the landmarks may be readily determined. The table forms an interesting supplement to the article upon the race which appears on page 34 of this number.

COMPOSITE LOG SHOWING MOVEMENTS OF BOATS FROM STARTING LINE TO FINISH.

Landmark.	Times from A. M. August 4 to P. M. August 5.							
	Mary C.	Chelwood.	Half Moon.	Inevitable.	Tranquill.	Eugenia.	Wachusetts.	Respite.
Starting Line	10:00	10:00	10:00	10:00	10:10	10:02	10:00	10:00
Battery	10:55	10:53	10:47	11:01	10:56	11:01	10:59	10:52
Sandy Hook		12:45	12:30	.....	.....	1:15	2:00	.....
Barnegat Light	6.05	6:35	5:59	5:20	7:54	7:50	7:37	6:40
Absecom Light (Atlantic City)	9:40	10:08	9:35	8:38	10:50	11:30	12:00	10:17
Cape May	2:40	3:00	4:00	2:10	4:30	7:00	11:10	5:06
Ship John	5:55	6:25	.....	.....	6:00	12:35	.....	8:30
Reedy Island	7:30	8:10	.....	.....	10:30	3:00	.....	5:07
Finishing Line	12:24	1:39	3:13	3:57	4:36	8:06	9:47	8:59

The log of Seneca was not obtainable.

New Things for Motor Boatmen.

New Attachments and Accessories That Are Offered to the Man With a Boat. The Month's Production of Devices Designed as Aids to Motor Boating.

[Under this heading will appear each month descriptions and, whenever possible, illustrations of the various devices designed to add to the pleasure and comfort of motor boating which have been brought out since the previous issue. It should be kept in mind that the department in any one issue is, as it were, only one month's installment of the many useful things on the market, and that it will be well to consult the previous issues of MOTOR BOATING which will form, together, a very complete illustrated directory of the things the motor boatman needs. —In writing the makers of the articles shown, if our readers will mention MOTOR BOATING they will receive special attention.]

A New Dayton Lighting Outfit.

The Dayton Electrical Mfg. Co., of Dayton, Ohio, have produced a new electric lighting outfit for launches and small cruisers and motor boats similar to their outfits which have been made for several seasons past for larger boats. This new outfit will be known as their 6-light outfit, and has sufficient electrical capacity to carry six 6-volt, 10-candlepower tungsten lamps, or their equivalent in lamps of other candlepowers at one time. The battery will carry these lamps for eight hours at one charging. The outfit works on the same principle as their older outfits. The current for the lights is drawn directly from the storage battery and this in turn is kept charged by a dynamo driven by belt from the flywheel of the engine. This method of generating current insures an ample supply at all times. This same current is also used for igniting the engine. This outfit has been designed because of a demand for an outfit of just this size. In the estimation of the makers, a good installation of lamps suitable to the average small cruiser could be made as follows: One 20-c.p. searchlight; four 2-c.p. signal lights; four 8-c.p. interior lights, making up the 60 c.p. available through this outfit.

* * *

No-Key Padlock.

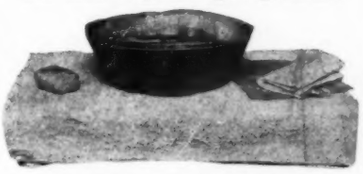
The American Keyless Lock Company. 417 South Dearborn St., Chicago, have brought out a new type of lock known as the keyless lock, which sells for $1.50. It is made entirely of brass and weighs 5½ ounces. The great advantage of this lock lies in the elimination of the key, this purpose being served by the buttons numbered 1 to 8 which may be seen in the illustration. These buttons form a combination which may be changed at the will of the owner, and allow more than 40,000 different combinations with each lock. There are no clicks to count and when the correct combination is pressed the lock will fly open instantly. It can be operated in the dark as well as in the light and the combination can be changed in a moment. The device is rust-proof and is strong enough to withstand a great strain. There is no intricate mechanism likely to get out of order and it locks itself as easily as the ordinary type of padlock.

* * *

The Aquaplane.

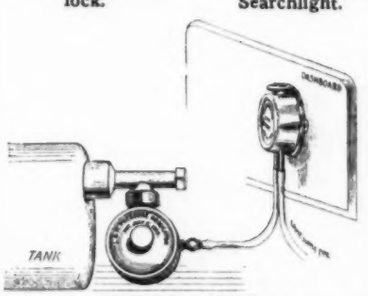
A new sport which gives almost the same thrills as those which have been long connected with surf riding in the Hawaiian Islands has just been introduced into the motor boating world by means of the aquaplane. The aquaplane consists of a plane strongly made from cypress lumber which is fastened at the end of a strong rope from the stern of any boat capable of a speed of eight miles an hour or more. The rider lies flat on the aquaplane, face downward, with feet extending over the rear edge until the boat is well under way, when he gradually brings his body to a kneeling position, and afterward slowly and steadily to a standing position. Graduated lines upon the board indicate the spot in which to stand for any given speed, and after a few trials even an inexperienced person can become an expert. There is practically no possibility of injury, although of course a life preserver should be worn if the rider cannot swim. A few upsets more or less only adds zest to this novel sport and incites the novice to renewed efforts to become proficient in the art. An interesting series of aquaplane races could easily be arranged and held in connection with a yacht club's regular water sports. It is capital fun on a hot day. The price of the aquaplane is $2.50, and it is made by the Aquaplane Co., Roanoke Building, Chicago, Ill.

The New Dayton Lighting Outfit.



The Rumpp Washup Outfit.

The No-Key Padlock. The Electric Star Searchlight.



The L. & H. Gas and Pressure Regulator.

The Aquaplane in Practical Use.

KeJeX.

A new device put out by the New York & New Jersey Lubricant Co., 165 Broadway, New York City, will prove interesting to the motorist who begrudges the time, muss, and inconvenience of loading a grease gun to lubricate the inaccessible parts of the car. KeJeX is packed at the works of the manufacturer with one or two pounds of their "K-No. 000" Non-Fluid Oil, which is a well-known lubricant. Each KeJeX is supplied with a spout and key which enables the user to supply his lubricant even more conveniently than with a long-handled piston gun. One turn of the key suffices to fill the average cup. By obviating the gun filling process, all muss and waste are avoided and the likelihood of getting grit into the lubricant is entirely overcome. Obviously, the KeJeX presents economical features not possible in the old method, and the shape of the can makes it possible to carry it as conveniently as the grease gun, assuring ever-ready lubrication.

* * *

A Convenient Washup Outfit.

A useful article for owners of small boats who do considerable cruising has just been placed upon the market by C. F. Rumpp & Sons, of Philadelphia, who have a sales room at 683 Broadway, New York City. This article is known as a "Washup Outfit" and consists of a folding rubber basin, together with a Turkish towel, a wash cloth in a rubber cloth pocket, and a soap box, all packed in a neat leather case. The size of this outfit when packed in the leather case and closed is 8 x 6¼ x 2½ inches, and it may be stored very conveniently anywhere in the boat. The price is $5.

* * *

"Electric Star" Searchlights.

The Milwaukee Bronze Castings Co., of Milwaukee, are putting out a searchlight made especially for motor boats and which will project an intense ray of white light of about 3,500 candlepower for a long distance ahead. The lamp is made of non-corrosive silvered aluminum and the reflector is brought to a very high polish so as to project a perfect light. There is no sheet metal or soldering used in its construction, and as the lamps are equipped with a security socket, the bulbs will not become loose under the most severe vibration. All the lamps are equipped with connectors, the complete weight of the ten-inch size being about 6½ pounds. They are designed to be operated from a storage battery, and a swivel arrangement is furnished which permits the light to be reflected in any direction. The lamps are equipped with Mazda bulbs with either candelabra or bracket brace.

* * *

L. & H. Light and Pressure Regulator.

This device is being marketed by the Auto Lamp & Metal Works, 1906 Broadway, New York City, and is designed to regulate both the pressure and the light automatically, so that it can be set without leaving the seat. It gives an even and effective gas supply, and whether one or more lamps are burned the instrument will take care of the flow of gas and give the proper amount to each lamp. No unnecessary flow of gas is allowed, as exactly the right amount is furnished all the time. The pressure regulator is fastened to the tank by a lock nut and the light regulator is fastened to the bulkhead or heel board by two small screws. The price complete is $10, or $4 for the light regulator and $6 for the pressure regulator.

Bosch Spring Coupling.

It is becoming the custom to arrange internal combustion motors so that the magneto is driven by means of a coupling from the pump or other shaft, and an Oldham coupling of the usual type is ordinarily employed. It has become apparent that an improvement was possible at this point, and the Bosch Magneto Company has produced a coupling that, while simple, gives a far greater range of adaptability than has previously been obtainable. The coupling is illustrated in the cut, and it will be seen to consist of two parts, one being cone-shaped with a crown end, while the other is a cross-piece of special construction. The crown carries two diametrically opposed slots which are lined with fiber. In these slots fit the ends of the cross-bar which, on examination, is found to consist of a great number of laminations of fine spring steel. By virtue of the spring the looseness and pounding, which may be produced with the ordinary coupling under the varying resistance to the rotation of the armature, is entirely absorbed, and the armature, in consequence, runs with much greater smoothness than is obtainable with any former type and with absolute silence. Furthermore, there is sufficient spring in the cross section of the laminations to permit the magneto to run with the armature shaft at an angle with the drive shaft. The coupling thus becomes a true universal joint, for it only gives a drive with the two shafts off center, as is the case with the ordinary Oldham coupling, but in addition permits the shaft to run out of line.

* * *

Bright Spot Light.

The "Bright Spot" is a new lamp which has just been brought out by the Bright Spot Mfg. Co., of Milwaukee. It operates by electricity, and the shell is made from a good quality of heavy rolled steel. The reflector is of specially treated non-corrosive metal which will not tarnish. The lamp is finished in black enamel with brass, nickel or black trimmings as desired. Mazda tungsten bulbs of 8, 10 or 12 candlepower are used regularly, but larger or smaller sizes will be furnished if desired. The lamps are dust and waterproof, and are easily adjusted. The cost for the 8-inch standard size is $5 each, for the 10-inch $7, and for the 12-inch $8.

* * *

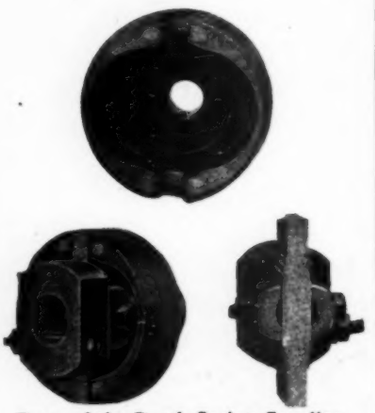
L. C. R. Storage Battery.

This battery is the product of the L. C. R. Storage Battery Company, 33 South St. Clair St., Dayton, O., and is said to have an unusually long life with high efficiency and full capacity. The battery is designed particularly for the lighting of motor cars and motor boats, or for use with their ignition system, and is supplied either with a hard rubber or with a wood case. The illustration shows the 6-volt, 100 ampere hour lighting battery. The batteries are made in two different shapes for each model, the 6-volt, 60 ampere hour type selling for $18, and the 6-volt, 100 ampere hour type selling for $25. They weigh 39 and 59 pounds, respectively.

* * *

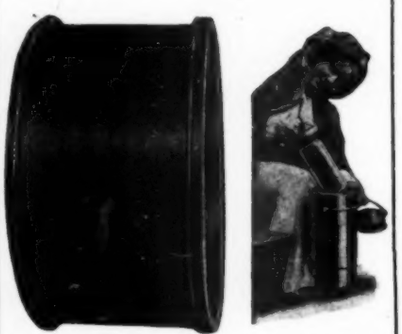
A. B. C. Wash Gun.

This is a new device made by the Artizan Brass Company, of Chicago, for the purpose of cleaning grease, grit, dirt, etc., from corners and crevices where it is impossible to reach with the ordinary method of cleaning. The gun holds about one quart of gasoline and when pumped to a pressure of 100 pounds it will instantly cut and wash dirt which accumulates on the machinery of a car. It is used by holding down the nozzle end so as to flush it with gasoline, and then pumping an air pressure of from 50 to 100 pounds into it. A small trigger arrangement controls the spray which will reach into any part of the car desired. The instrument can also be used as an oil gun and will deliver oil to any part of the car in any quantity necessary, depending upon the amount of pressure used. The more the pressure that is applied the more force will be exerted by the contents of the gun. Most every enthusiast likes to tinker on his engine, but very few care to spend much time or labor on the job of cleaning oil, grease, etc. Hence a device that tends to reduce the time and labor necessary for this distasteful operation cannot fail to be appreciated and sought for with avidity. The price is $5.



Parts of the Bosch Spring Coupling.

The New Can in Which Monogram Oil is Supplied.



The Bright Spot Light. The Vac-Jac Magnum.

The L. C. R. Storage Battery.

The A. B. C. Wash Gun.

Autopower Carbon Remover.

The Lakewood Chemical Company, 805 Citizen's Building, Cleveland, Ohio, have recently placed on the market a carbon remover which decomposes the carbon in the cylinders, leaving it in the form of a soft, black paste, which will not destroy the valve seats, and which can be blown out easily. The surfaces of the valves and cylinders are left with a thin film of oil, so that it is not necessary to remove the oil after blowing out the carbon. This preparation will operate equally well in vertical or horizontal clinders, and if used according to directions, it is said to increase the compression to such an extent that a readjustment of the carbureter will doubtless be necessary. The Carbon Remover is sold in quart cans for $1.25, half gallon cans for $2 and gallon cans for $3.50.

* * *

Monogram Oil.

Monogram Oil, which is manufactured by the Columbia Lubricants Company, which is consolidated with the New York Lubricating Oil Company, of 116 Broadway, New York City, is now put up in a new and convenient type of container, and sold at the same price as formerly. The new can, which is shown in the accompanying illustration, is of a convenient shape for storing and holds one gallon. It is furnished with a spout opening upon one corner which may be tightly covered and which is very convenient in filling small oil cans, as a very small stream can be poured without danger of spilling the oil. The oil is made in a number of weights for different purposes and for different types of motors.

* * *

Vac-Jac Magnum.

A vacuum bottle presenting the unusual advantages of holding either solid or liquid foods, keeping them hot for ten hours, or cold for thirty hours, is made by the Vacuum Insulating Co., 122 South Michigan Ave., Chicago, and sells for $5.00. The reason that ordinary vacuum bottles cannot be made larger than quart sizes in glass is due to the atmospheric pressure, which is so great that thin glass cannot withstand it. In the Vac-Jac Magnum there is no glass under atmospheric pressure, the insert being a simple straight bottle with a screw top. This bottle has a wide mouth, and slips easily in and out of the metal container. The vacuum is permanently retained in the metal case which is 15 inches high and 6 inches in diameter, with an insulated cover. The vacuum insulation is supplemented by breaking up the space into a great number of infinitesimal cells, and producing a vacuum in all of the spaces by infusing "Kobold Compound," a material of the lowest conductivity into the vacuum space. The prevention of radiation by this means is said to more than offset the slight loss through conduction, the net gain in efficiency being about 27 per cent.

* * *

Transporal.

A protective finish for wood or metal which is said to cover perfectly one and one-half times more surface than the ordinary kind of varnish is being made by the American Transporal Co., 50 Church St., New York City. It can be applied in cold or warm weather, and produces a gloss, semi-gloss or flat finish as desired, which may be washed with water or with soap and water. Its use has demonstrated that it is very economical and is an ideal foundation for japan colors, stains, fillers or for bronzing liquids. It is made in eight different numbers for various purposes, and sells for $1.25 a quart or $4 a gallon.

* * *

Carbon-Nit.

A carbon solvent has been placed upon the market by the Latolian Manufacturing Company, of Clinton, Iowa, which may be poured into the air intake slowly while the motor is running, allowing the motor to continue to run until it ceases to smoke. This process will dissolve the carbon very rapidly, although when the carbon deposit is exceptionally heavy it is well to pour into each cylinder one-eighth pint of Carbon-Nit and allow it to stand over night. The preparation is in itself a lubricator and can be mixed with oil without harmful results.

Yard and Shop

From Bath to Duluth.

One of the longest cruises ever attempted by a motor boat of her size, without a hired crew, was safely ended recently when the boat Hesperia, owned by C. A. Congdon, dropped anchor in the harbor of Duluth, twenty-five days out from Bath, Me. Hesperia is 53 feet long and has a beam of 12 feet. She made the entire run under her own power, which consists of a 60 h.p. heavy-duty six-cylinder Sterling. Much dense fog and a number of severe squalls were encountered on the Great Lakes. The route taken was by New York, Hudson River, Erie Canal, and the Great Lakes.

A decidedly different type of boat, Harvester, is shown in an illustration on this page. This boat is also fitted with a Sterling engine, of the same type as that in Hesperia. Harvester is 90 feet long by 24 feet beam and is used as a lighter by her owner, the International Harvester Company, of Chicago.

A Gasoline Side Wheeler.

A patent has been granted to S. Arnold, of Brooklyn, N. Y., for a new device for propelling small boats, its adaptation being especially for boats intended to be run in shallow water and where the water is clogged with weeds. Greater speed at a given horsepower is also obtainable, it would seem, from claims of the inventor who drove a thirty-foot boat by this device at the rate of eight miles per hour with two horsepower. The diagram is self-explaining: A one to two-gear is placed on the engine shaft transferring the power to a one-inch shaft which, in turn, transfers by a chain and two sprockets, six and twelve inches, respectively, to the shaft on which the paddles, two on each side, are fitted.

"Through the Tangle Like an Eel."

Such is the slogan of the Stickler Weedless Wheel, manufactured by the Stickler Weedless Wheel Company, Portage, Wis. On account of its peculiar shape the tough, clinging plants that clog the ordinary wheel, cannot lodge and clog the Stickler. Actual demonstrations have proven, too, that there is practically no dimunition of speed when in weeds, and no extra demands on the power. The wheel takes water first at its center. At that point the blades are running directly toward the water. Gradually the volume of water displaced is increased to the outer edges of the blades. Not only is it impossible to catch anything on the wheel, but the danger of breaking the propeller is greatly lessened by its shape, as in striking an obstruction the blow must be a glancing one. Stickler Weedless Wheels are made with two and three blades, with diameters of from 10 to 28 inches in the two-bladed and from 8 to 28 inches in the three-bladed type.

A corner of the home of the Motor Boat & Supply Co., Cleveland, O.

Western Racers Used Monel Metal Propellers.

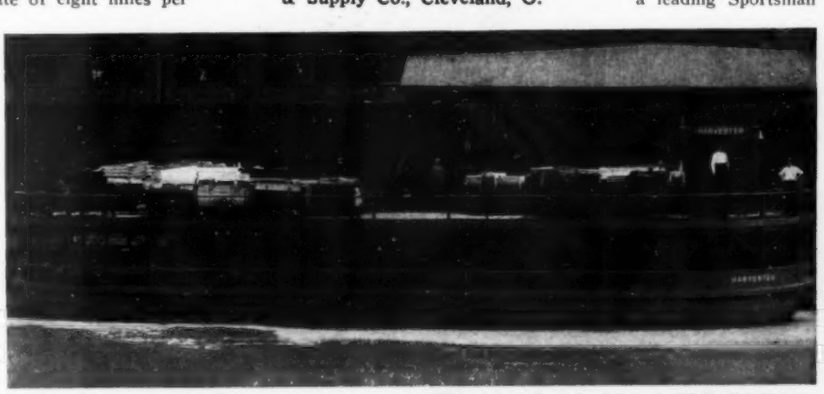
It is interesting to note that of the five starters in this year's Dubuque races, three of them, namely, Disturber II, Red Top III, and Comet, were equipped with Monel Metal propellers. Disturber II is fitted with two of the 19-inch size.

Racers Equipped with Bosch Magnetos.

Of the boats entered in the Gold Cup Races at the Thousand Islands, August 8 to 10, it is significant that Dixie IV employs Bosch plugs, in connection with the make-and-break mechanisms made by the designers; that Wasp uses two "DR6" Bosch magnetos and twelve Bosch plugs; that Hornet uses two "DU4" Bosch magnetos, and eight Bosch magneto plugs; that Mit II uses one "DR8" Bosch magneto, while Skipper uses one "K8" Bosch magneto and eight plugs. Corsair, winner of the Puget Sound International Race, is powered with a 24 h.p. Buffalo motor using a Bosch magneto and Bosch spark plug.

Scripps Motor Makes Record Run in Finland.

The agent at Finland for the Scripps Motor Company writes of a record run made from Ado, Finland, to Stockholm by Baron Brekel, a leading Sportsman of Finland, in his fast motor boat Najas, powered with a 20 to 30 h.p. Scripps motor. The big Finnish passenger steamers make the run in fourteen hours, and the Najas, which is only eleven meters in length, made the trip across the Aland Sea in fourteen and a half hours, in spite of three hours' storm, rain and rough going. The [illegible] interested [illegible] dish yacht [illegible] Scripps motor, [illegible] already [illegible] noticed [illegible] interest shown [illegible] country in this popular American motor.



The International Harvester Co.'s new lighter is equipped with a 60 H.P. Sterling.

Modified Viper Brings Home the Bacon.

The Vim Motor Company's modified Viper at the Interlake regatta held this summer at Put-In-Bay, won the 26-foot championship flag, silver cup, and cash prize of $110. The hull is 25 x 4 feet, and very heavy, being built for the purpose of testing out engines. The power plant consisted of a 4-cylinder, 46 to 55 h.p. Vim motor, which drove her at a speed of a little better than 24 miles.

Skipper Day Clad in Impervo.

As an illustration of the superiority of the well known Impervo waterproof clothing, the fact that Mr. Thomas Fleming Day who stuck to Impervo on the recent trans-Atlantic cruise of the Seabird was always perfectly dry, while his two companions, who were clad in regular oilers were often soaked through, may be cited. The manufacturer of Impervo Clothing, Mr. E. A. Armstrong, is an old-time yachtsman himself, and undoubtedly the many drenchings and discomforts he experienced have stimulated him to invent a material which is actually and not theoretically waterproof. Further information can be obtained from the Impervo people by addressing Mr. Armstrong, 209 West Kinzie St., Chicago, Ill.

Cups Won by Kuleoff.

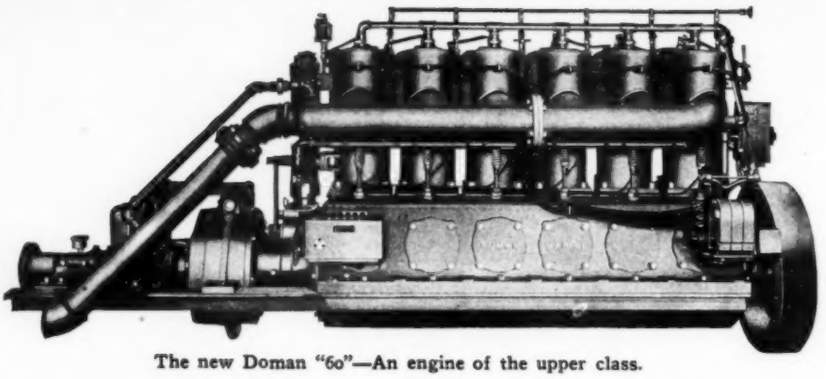
Among the boats that made a remarkable showing in Florida waters last spring is Kuleoff, a 26-footer owned by W. H. Synder, Pittsburg, Pa., and powered with a 25 h.p. Buffalo "Auto Marine" engine. The cups that this boat has won make an imposing array. They include the Rockeyledge-Cocoa Merchants' Cup, the Jacksonville Power Boat Club Panana Cup, for boats over 20 miles; the Palm Beach Power Boat Association Park and Theford Cup; the Jacksonville Power Boat Association Visitors' Cup, for boats not over 20 miles; the Rockeyledge-Cocoa Yacht Club Cup, and third prize in the St. Augustine Power Boat Club 20-mile free-for-all.

A Correction.

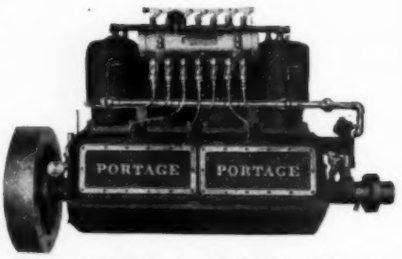
Amid the haste with which the Halifax Race Supplement to the August number of MoTor BoatinG was of necessity compiled, an unfortunate error crept in. The Supplement states that Snap Shot III, one of the contesting boats, was designed by James Butler. In reality, the designer of Snap Shot III is Southmayd Hatch, of 1328 Broadway, New York City, as is stated in the regular article about this boat which will be found on page 51 of the August number.

Equip Ships with Power Life Boats.

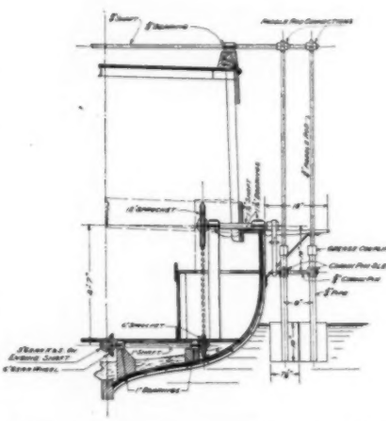
The recent successful demonstrations of gasoline engines in life boats in heavy weather are significant in indicating the possibilities of motor boats as a part of the life-saving equipment of big ships. If the power boat was substituted for the oar boat, many lives would be saved, and the danger of shipwrecked crews dying of hunger or going mad with thirst, would be greatly diminished. If there is any time when a life boat should be able to furnish its own power, it is in an emergency like shipwreck.



The new Doman "60"—An engine of the upper class.



Portage engines are designed with an eye for quality in every operation.



Two horsepower was sufficient to drive a thirty-footer eight miles an hour by means of this side wheel device.

New Motor Boat Shop in Delaware.

The State Department of Delaware has issued certificates of incorporation to the Nameless III Company to acquire charter, to take and exchange, and build and operate motor boats of all kinds. The incorporators are C. B. Jaqua, of Paterson, N. J.; A. J. Brautigan, of East Orange, N. J.; W. W. Pusey, of Wilmington, Del.

In the Foreign Field.

From the Consular Service in the Field comes the following news of interest to the motor boat trade: In Singapore a company is being floated, capitalized at about $35,000 United States currency, to establish a motor launch service for carrying passengers to and from vessels lying in the roads, and also for pleasure purposes. Representatives of two American motor engines are now making an effort to obtain the contract, which will probably be for twelve engines at the beginning. The address of the man who will be at the head of the service may be obtained from the Bureau of Manufacturers.

It is a bit strange that to date there are practically no American motor boats in use in Turkish waters, and very few from any other country. It seems inevitable that the time will soon come when motor boats, motor tugs, motor lighters and the like will abound on the Bosphorous and neighboring waters.

The following foreign trade opportunities have been recorded:

No. 281. Tug.—Sealed proposals for construction of the wooden, screw, gasoline, tug patrol will be received at the office of the United States Engineer Office, Duluth, Minn., until 12 m. August 28, 1911, and then publicly opened.

No. 7021. Marine paint and oil lamps.—An American consul reports that a business man in a Mediterranean country desires to communicate with American dealers in marine paints and petroleum lamps. Ordinary lamps are not wanted; the kind desired is known as an "incandescent" lamp. Only low-priced goods find a market. The marine paint should also be reasonable in price, although better prices relatively are obtained for paint than for lamps, as much of it is paid for ultimately by steamship companies.

No. 7064. Motor boats, lead, tin, etc.—The Bu-

(*Continued on page 68.*)

ELIMINATION TRIALS: August 30, 31 and September 1, to determine defenders of the Harmsworth Trophy. Motor Boat Club of America, Huntington, L. I.

CITY ISLAND (N. Y.) Y. C.: September 2, 3 and 4. Cruise.

NEW YORK MOTOR BOAT CLUB: September 2. Club races for open boats. N. Y. M. B. rules.

ROBBINS REEF Y. C.: September 3 and 4. Club run to West Point.

BRITISH INTERNATIONAL RACES: September 4, 5, 6. For the Harmsworth Trophy, defended last year by Dixie III. Huntington Bay, L. I. M. B. Club of America.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS: September 4 to 9. Annual National Motor Boat Carnival. Held by the National Association in conjunction with the Motor Boat Club of America. Race for the high speed, long distance trophy. Race for cruisers, etc. Huntington Bay, L. I.

ASTORIA, ORE., MOTOR BOAT RACE MEET: September 4 to 9. Astoria Centennial on Sept. 7, 8 and 9. Free-for-All Pacific Coast championship series.

HUDSON RIVER YACHT ASSOCIATION: September 4. Regatta at Yonkers.

JUBILEE Y. C., BEVERLY, MASS.: September 4. Final race for Vittum cup.

CAMDEN MOTOR B. C.: September 9. Open race for speed boats.

EXCELSIOR Y. C., BROOKLYN, N. Y.: September 9. Stratford Shoals Light and return race for cabin boats.

HUDSON RIVER MOTOR B. C.: September 9. Open race to Poughkeepsie, and return.

DELAWARE RIVER CLUB, TORRESDALE, PA.: September 9. Regatta.

QUINCY, MASS., Y. C.: September 9. Club Races.

WINTHROP, MASS., Y. C.: September 9. Club Races.

BUFFALO L. C.: September 9. Club Races.

EXCELSIOR Y. C., BROOKLYN, N. Y.: September 10. Race around Staten Island. For open motor boats.

NEW YORK MOTOR BOAT CLUB: September 17. Economy race.

GREAT LAKES CHAMPIONSHIP FOR THE E. R. THOMAS TROPHY: September 16. Motor Boat Club of Buffalo.

DELAWARE RIVER CLUB, TORRESDALE, PA.: September 23. Fifth race for the Governor's cup.

FARRAGUT SPORTSMAN'S ASSN., CAMDEN, N. J.: September 23.

NEW YORK MOTOR BOAT CLUB.: September 24. Rockland Light Race.

CORINTHIAN Y. C., CAL.: September 24. Power boat races.

SOUTH COAST Y. C.: October 1. Club races, for motor boats.

SAN FRANCISCO Y. C.: October 8. Motor boat regatta.

MoToR BoatinG Advertising Index

THE MOTOR BOATING MARKET PLACE

Opportunities for the Motor Boatman

The rate for "For Sale" and "Want" advertisements is 3 cents per word. If an illustration is used the charge is as follows, which includes the making of the cut:
Cut one inch deep, one column wide..... $2
Cut two inches deep, two columns wide..... $3
Cut three inches deep, three columns wide.....$10

Before you buy or before you sell examine the exceptional buying and selling opportunities under this heading. They comprise the best offers of the month. Please mention Motor Boating.

SIXTY shares, capital stock of the Standard Motor Construction Co., Jersey City. Stock is $10.00 par, and last block was sold almost a year ago at $7.00, but I need the money and will sell at a bargain. J. C. Woodson, St. Francis, Ark.

ONE Loew Victor Engine, Model 1910, 4 cylinder, 4 cycle, 24-40 HP.; used six weeks; fine condition; complete with magneto, reverse gear, air compressor, carbureter, plugs and cables, all connected up. Rare bargain, $450.00. Loew M'f'g Co., Cleveland, Ohio.

WANTED — First-class, second-hand, high-tension magneto for four-cylinder, four-cycle, jump-spark engine. T. N. Schneider, Chattanooga, Tennessee.

300 H. P. Standard, single acting, air starting and reversing, first-class condition, $2,500.00. Bruns Kimball Co., 134 Liberty Street, New York.

WANTED—Second hand gas marine engine, heavy duty, 40 to 65 H. P. Must be a bargain. G. P. Wiggins, Green Cove Springs, Florida.

FOR SALE.—1 new 100-125 H. P. 6 cylinder high speed Emerson engine, never taken from crate. Equipment Bosch Magneto Atwater Kent Ignition system, Oneway clutch, 10 ft. 6 in. bronze shaft, special racing wheel; cost $2,250.00, will sell $1,250.00; reason for selling putting in more power. Address William Duffney, Houghton, Michigan.

FOR SALE—One 40 foot cruiser, new; strongly built; natural growth keel; stern and timbers built of best material; hard wood finish; fore and aft cabin, engine room, toilet, cockpit, each 6 feet square; head room; 8½ beam; 10 H. P. Fairbank engine; makes 10 miles per hour; worth $2,500, can be bought of $1,500. Address Lock Box 254, Aberdeen, Md.

SALESMAN, with established motor boat trade, to sell Speed Propellers and Marine Hardware on commission. Aetna Brass Mfg. Co., Cleveland, Ohio.

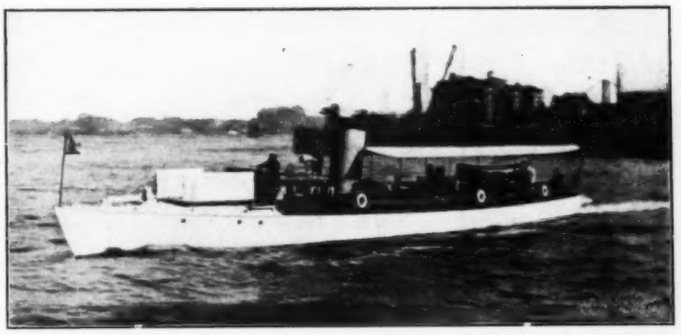
FOR SALE—40 foot cabin cruiser, 20 H. P. engine, electric lights, ice box, galley, toilet, sleeps four and engineer; now in commission; recently overhauled; big bargain; cost $5,500; price $1,600 net. Photograph and details from owner, Room 505, 38 Park Row, New York City.

PRIVATE and fully equipped houseboat, situated on the St. Lawrence River, 1000 Islands, for sale; further information supplied upon request. Gielow & Orr, 52 Broadway, New York.

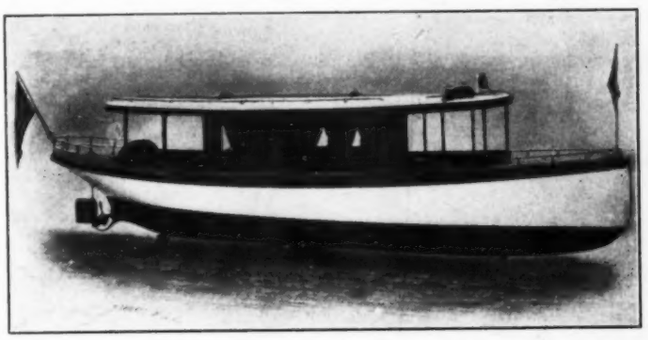
FOR SALE—Beautiful 25x5 runabout. Speed 14-15 miles. Mahogany and cedar hull. 11 H. P. $650. Weber, 514 W. 184th St., N. Y. City.

WANTED—OCTOBER 15—Thirty-foot cruiser equipped with 4-cycle heavy duty engine. No replies from brokers considered. Send inventory and photograph to A. B. Skelding, Wilmington, North Carolina.

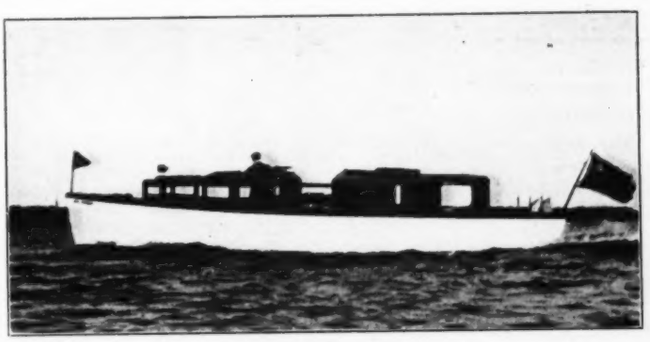
NEW 54 H. P., six-cylinder Elbridge engine, just from factory. Aluminum manifolds, base and cylinder heads, extra finish throughout. Built for Mr. Coleman du Pont of Wilmington, Del.; exchanged for a larger power. Price $700. Emerson Engine Co., Alexandria, Va.



No. 32.—Immediate offer desired. Fast steam yacht 85x11x4.8 ft. Speed 16 to 18 miles. Triple expansion engine. Owner going out of yachting and is very anxious to make immediate disposal. Cox & Stevens, 15 William St., New York.



No. 861.—Best offer before September 15th buys 36 ft. electric launch (illustrated above), built by Electric Launch Company, and now stored at their works, Avenue A, Bayonne, N. J. Apply to Cox & Stevens, 15 William St., New York.



For Sale.—No. 6300.—40 foot gasolene day cruising launch. 8 feet beam, 3 feet draught; 25 H. P. Lozier engine, controlled from bridge deck amidships; cabins berth 4; headroom 6 feet; mahogany interior; speed 8½ knots; completely equipped. Price, $1,500. Will make liberal concession if taken prior to going out of commission. Apply Stanley M. Seaman, 220 Broadway, New York.

SPECIAL TRADE LIST.

ACCESSORIES.
L. B. Allen Co., inc., 3517 Lincoln Street, Chicago, Ill.
American Commercial Corp., 110 West Street, New York City.
Geo. A. Cutter, Taunton, Mass.
Fowler Lamp & Mfg. Co., 57 East 24th Street, Chicago, Ill.
Phoenix Paint & Varnish Co., 124 Market Street, Philadelphia, Pa.

CHARTS.
The Dunbar Brothers Co., Bristol Conn.
Sheriff's Manufacturing Co., Milwaukee, Wis.

COTTON, DUCK CANVAS.
Lowell Weaving Company, Lowell, Mass.

WATERPROOF CLOTH.
Fabrikoid Works, Newburgh, N. Y.

IGNITION.
Fahnestock Electric Co., 129 Patchen Ave., Brooklyn, N. Y.

BOAT BUILDERS.
Kyle & Purdy, Inc., City Island, N. Y.

MOTORS.
Acadia Gas Engine Co., Ltd., Bridgewater, Nova Scotia.

FLAG POLES.
Novelty Manufacturing Co., Waterbury, Conn.

METAL STAMPING.
The Chandler Co., Inc., Springfield, Mass.

What You Are to Do

Simply send us the names and addresses of the people you know who will be interested in MoToR BoatinG.

What We Do

First we copy these names on cards and mark each card so that we know you sent it in. Then we tell these people about MoToR BoatinG and as each one subscribes, you will be given a four months' subscription to MoToR BoatinG.

What You Get

For each new subscription we get from your list, we will give you a four months' subscription to MoToR BoatinG—thus if only three orders come in from your list, you will receive a year's subscription to MoToR BoatinG. And the more names you send in, the more orders you will receive credit for.

Be careful to write the names and addresses plainly and don't fail to put your own name and the address at which you are receiving MoToR BoatinG on each list you send.

Address all lists to the Circulation Department, MoToR BoatinG, 381 Fourth Ave., New York.

How to Prevent Carbon Deposits.

THE method to keep the cylinder walls free from carbon can be summed up in a very few words: (1) Use the best grade of oil; (2) use the right amount of oil; (3) use a uniform mixture, and (4) use an early spark. Then carbon troubles will be reduced to a minimum.

If the splash system is used, have the level as high as possible without having signs of smoke appear at the exhaust.

GOOCH SARGENT, Newburyport, Mass.

THE best method to keep cylinder walls free from deposit is to avoid carbon depositing (to any appreciable extent) by using a proper mixture—not too rich in gasoline, so that you get complete combustion in the cylinder, and by using a high grade, light colored cylinder oil, filtered and practically free of carbon. The color merely indicates the amount of carbon in the oil, the more it is filtered, the less carbon it contains, and the whiter it looks. Use enough oil, but not more than necessary to properly lubricate.

The above, with the injection once or twice a month of a high grade liquid carbon remover, following the manufacturer's directions, to remove the slight deposit which is bound to occur, will keep the engine free from carbon troubles at all times. By following the above rules I have run both two and four-cycle engines for years, and have yet to scrap my first carbon.

Contrary to most engineers, I say never use kerosene to cut carbon, as it will pit (even if only to a microscopical extent) the glassy surface of the cylinder and piston rings, and make carbon adhere more freely. In the United States navy it is a court-martial offense to clean steel or gun metal with kerosene.

LEO D. BAKER, M.E., Avalon, Catalina, Cal.

Results of Fire Island Race.

(*See pictures on page 8.*)

Power Boat Division, 30 to 100 Feet.

	Elapsed.	Corrected.
Kitsix	8 20 40	7 50 19
Francis H., G. W. Hoertel	13 25 18	8 01 47
Lida M., C. P. Holland	11 27 30	8 15 19
Inevitable, H. A. Johnson	8 20 40	8 20 40
Canadice, R. S. Mills	10 11 18	8 22 30
Bedouin, F. S. Salomon	11 25 35	8 44 12
Suis Moi, R. Henke	Disabled.	

Power Boat Division, Special Class.

Francis H., G. W. Hoertel	13 25 18	9 12 14
Lida M., C. P. Holland	11 27 30	9 25 36
Canadice, R. S. Mills	10 11 18	9 33 47
Suis Moi, R. Henke	Disabled.	

Among the Clubs.

(*Continued from page 46.*)

Grand Rapids, Mich. The Spring Lake Motor Boat Club have recently purchased land at the foot of Alden Avenue, and a fine club house is there being erected. This active organization have elected the following officers for the current year: Commodore, C. A. Williams, Chicago; vice-commodore, Chauncey M. Blakeslee, Spring Lake; secretary, Jas. W. Harison, Chicago; treasurer, Leon J. Campbell, Spring Lake; fleet captain, Harry McNeish; directors, A. H. Babcock, Spring Lake; C. W. Lehmann, Elgin; G. A. Kusterer and Len Patterson, of Grand Rapids.

The Harlem Yacht Club, New York City, under whose auspices a sailing race on Long Island Sound to Stratford Shoal and back has been held for several years, added this year a similar race for power boats. The race, held on Saturday, August 19th, was a night run, the boats starting at six o'clock in the evening. The race was in charge of the following committee: Walter S. Sullivan, chairman; Wm. J. Fowler and Edward M. Hartmann.

Lansing, Iowa. A club has recently been formed here to be known as the Lansing Motor Boat Association. The following officers have been elected: Commodore, J. T. Conway; vice-commodore, W. E. Albert; rear-commodore, Sam Fink; treasurer, Grant Ladd; secretary, Fred Schaefer.

Ithaca, N. Y. Following are the officers of the Shadhall Motor Boat Club for this season: Commodore, Fred Smith; vice-commodore, James Seaman; secretary, Harry Ryerson; treasurer, Charles Schryver.

Lake Hopatcong, N. J. Motor boating on this popular lake has received added strength by the formation of a new club known as the Independent Boat Co., its object being to give better service to those interested in motor boats and as a social organization. Following are the newly elected officers: Commodore, Jerome Knight; vice-commodore, Thomas Lee; secretary, H. C. Yates; financial secretary, John Williams; treasurer, Daniel Hammer.

Cambridge, Md. The old Colonial home of the late Judge Charles F. Goldsborough, located at High Street, has been acquired by the Cambridge Yacht Club, and will be used as a club house. It is excellently designed for this purpose, and the grounds are extensive.

New Brunswick, N. J. On account of the large waiting list to the New Brunswick Yacht Club the limit of membership has been extended from 250 to 350. The following are the officers for the present year: President, Frederic Weigel; vice-president, Robert J. Smith; treasurer, Theodore Whitlock; secretary, William Watson; financial secretary, T. W. Stoetzel; captain, Charles Forman; trustees, T. Henry Rastell, Elmer E. Connolly, Edward Carpenter.

The Lake Placid Yacht Club, Lake Placid, N. Y., held on August 5th the first of the three races in the series for the Lake Placid Motor Boat Challenge Cup. The course of about twenty-five miles comprised a circuit of the lake three times. Among the boats entered were a 40 h.p. hydroplane owned by Marsen Buttfield, of Plainfield, N. J., and Natoma powered with a 90 h.p. Buffalo, owned by Clifford Herbert, of New York City. The latter made the best time in the race. The second and third races of the series were held later in the month.

SUMMARY OF THE FIRST RACE.

Boat.	Start.	Finish.	Corrected Time.
Natoma	4:18:08	5:25:35	1:07:27
Scarem	4:18:08	5:26:10	1:08:02
Wangunden	4:14:11	5:25:50	1:11:39
Whiteface	4:04:19	5:26:29	1:22:10
Hyke You	4:02:44	5:25:40	1:22:56
Topsy	4:01:56	5:25:39	1:23:43
Theanogra	3:57:10	5:25:26	1:28:16
So Long	3:40:23	5:24:11	1:43:48
Splinter	3:36:09	5:24:46	1:48:37
Sabrina	3:30:00	5:24:08	1:54:08

The Canandaigua Boat and Boathouse Association, Canandaigua, N. Y., held a very successful regatta on July 27th. Prizes were awarded for best decorated boat and for the winners of two races, the boats being separated into two divisions according to speed.

Rangeley, Me. A motor boat club has been formed to establish a boat house and to facilitate motor boat landing on the shores of the lakes. The following officers have been elected: President, C. C. Crocker; vice-president, Dr. Fowler; secretary-treasurer, C. C. Wilbur; commodore, Prof. Neher; vice-commodore, Alton Wood; fleet captain, M. Wadsworth; chief engineer, Ernest Haley.

What Happened at Peoria.

(*Continued from page 34.*)

Scamp finished in the order named, A. K. having dropped out after the first round.

It was late in the afternoon before the 20-mile race for the 32-foot class was started. But there was no waning of enthusiasm. Sand Burr again won with the Missouri III second, Regal Tiger third, and Water Witch II fourth, Leading Lady, Scamp and A. K. having withdrawn.

The big event of the meet, that for the 40-foot class, was scheduled for the first race of the second day, and the very air was charged with enthusiasm as Commodore Pugh's Disturber II, and Hughey's Red Top III, the two Fauber hydros, Carl Fisher's Seabury racer and the smaller boats cut circles round the judges' barge. The race was for 25 miles, or 5 rounds of the course, and at about three o'clock starter Ohl gave the signal for the start. Sand Burr II and Premier III got away with the three bigger boats, and it was not long before Disturber II came tearing down the stretch and around the stake boat, completing the first five miles in 7 minutes, 58 seconds, which is at the rate of 37.7 miles an hour, a new American record for speed in competition.

In the meantime Regal Tiger, the Little local hydroplane that had won second place in the 20-foot class, in swerving past some obstruction, was seen to throw her crew into the water and start threading her way at a tremendous pace through a number of boats loaded with spectators, missing them almost miraculously and shattering her lightly constructed hull into a mass of kindling against an old tug drawn up on shore.

Red Top was only 21 seconds behind Disturber at the turn and Eph was third, with Sand Burr hanging tenaciously at her heels. The relative positions of the racers remained unchanged during the second round, but Red Top had gained ten seconds on Disturber at the end of the third. Red Top gained a little more at the turn, but Disturber again pulled away. On the back stretch of the fourth lap Red Top actually passed Disturber, but again was soon overhauled by the latter.

On the stretch several hundred yards above the judges' barge, Disturber, now leading by a narrow margin, was seen to lurch wildly, first to starboard, then to port, and to slacken her pace a trifle. She staggered on to the stake boat, the steering gear of one of her rudders gone, and held to her course only by the fierce efforts of Commodore Pugh and Eddie Hearne, one of her mechanicians, who climbed out on the after deck and held the broken gear in place with his feet while the other mechanicians tended the throttles of her two 8-cylinder Sterlings. She held her lead until, on the back stretch of the last lap, she was passed by Red Top III, who finished first in 42 minutes 11 seconds, or at tht rate of 35.56 miles an hour. Sand Burr II also passed Disturber, and finished in second place, the latter boat still carrying along at express train speed, whenever Pugh and Hearne could get her straightened out on her course, and finally coming in third amid tremendous cheering. As soon as her pace slackened, however, Disturber was seen to settle at the stern, water pouring into the hole in the transom where the rudder bracket had been torn loose. Her crew worked hard to keep her afloat, but finally were forced to abandon her, as she sank in thirty feet of water—though beaten, still the fastest boat ever seen in Western waters.

The last race of the meet, that for 26-footers, was called at 5 p. m. Leading Lady, Scamp, A. K. and Water Witch started with Sand Burr, but, as was expected, the little flier from the East won the event, only a few seconds, however, ahead of Leading Lady.

Sand Burr made the first five miles of this race in eight minutes and fifty-two seconds, or at the rate of 33.83 miles an hour, the fastest time ever made by a 20-footer in America.

Yard and Shop.

(*Continued from page 50.*)

reau of Manufacturers is in receipt of a letter from a business man in the Levant requesting that he be put in touch with reliable American manufacturers of motor boats. The writer states that the motor boats are for Government use.

No. 7146. Metal motor boats.—An American consular officer in South America reports that a party in his district desires catalogues and price lists from American manufacturers of metal motor boats.

Large Work Boat Launched in Delaware.

From the yard of the Milford Shipyard, Milford, Delaware, the largest gasoline boat ever launched in Delaware recently made its debut. The boat, which is owned by Wilson M. Vinyard, of Milford, for use in the inland coasting trade between Philadelphia, Baltimore and Washington, is 121 feet keel, 26 feet beam, and 7 feet in the hold and will have installed a 150 h.p. engine.

Big Cruiser Launched at Stamford Motor Works.

There recently slid from the ways of the Stamford Motor Works the cruising motor yacht Arvel, owned by A. W. Teele, of New York. She is a 75-footer, equipped with two 100 h.p. engines. She is an entrant in the Bermuda race of September.

Mississippi Valley Power Boat Show.

As evidence of the live interest now felt in motor boating throughout the entire Mississippi Valley, the Mississippi Valley Power Boat Association is making extensive preparations for its first motor boat show, which will be held in St. Louis next December. This association has done much to stimulate the sport in this region by conducting regattas, races, water carnivals, conventions, etc., all of which have been pronounced successes. The following members compose the show committee: R. H. Combs, chairman, of St. Louis; W. V. Kidder, of LaCrosse, Wis.; A. C. Adams, Muscatine, Iowa; A. T. Griffith, Peoria, Ill.; H. H. Lippert, St. Louis. The date has been set for the week of Dec. 11th, and so does not conflict in any way with the dates of the Eastern shows.

Some Portage Engines.

A slogan of the Portage Boat & Engine Co., Portage, Wis., is that the Portage engines are "rated by brake test—not by imagination." It is the aim of this company to produce engines of quality, and they warn the public to remember that a cheap motor is dear at any price. Portage engines are all four-cycle, and are all equipped with force speed pump oilers. They are made in one, two, three and four-cylinder types.

A Racer for 1912.

George Schreiner, of the Dubuque Motor Boat Ways, does not intend to run any risk of not having his boat finished before the entries close, so he has begun the construction of a new racer on which he will pin his faith in 1912. The new boat will be a 26-footer, and will carry the two 55 h.p. Vim engines that powered the unfortunate Vim Dubuque. The owner plans to enter his boat in all but the smallest of the four racing classes. She will be built as a V-bottom, stepless hydroplane, propelled with twin screws.

Eastern Motor Sales Co.

The Eastern Motor Sales Company has discontinued their New York office at 1680 Broadway and will have their offices and show room at 78 Broad Street, Maritime Exchange. The company have also opened a shop at Ulmer Park, Brooklyn

Cleveland Marine Supply House.

The Motor Boat & Supply Company, located at 1516-20 Columbus Road, Cleveland, Ohio, since their entry into the motor boat field three years ago, have made rapid strides in this business. They carry a complete line of all marine hardware and accessories that go to make up a power boat. Their 18-foot special is attracting considerable attention. A new 1911 catalogue, 125 pages, will be sent to any readers of MoToR BoatinG.

Bluebird Powered with Gray Motor.

Bluebird is the name of a boat that made a runaway race of the power boat event in the races of the Chesapeake Bay Yachting Association, of Hampton Roads Yacht Club. She is equipped with a 24 h.p. Gray motor, owned by Wallace Brothers, of Norfolk, Va. There were five entries for the race and Bluebird finished eight minutes ahead of Earlybird, the second boat.

Large Addition to Standard Shops.

Now that the labor troubles, which have greatly embarrassed manufacturers in New York and Hudson County, are over, the Standard Motor Construction Company are to

(*Continued on page 70.*)

Yard and Shop

(*Continued from page 68.*)

commence work on a large addition to their shops. Plans are all laid out and ground will be broken at once for the modern concrete building. This new building is planned to make possible an output large enought to assure to all customers prompt shipments on all sizes of engines.

The Ferro's Photo Contest.

In announcing the photo contest now being carried on by the Ferro Machine & Foundry Company, no mention was made of when the competition would take place, or when it closed. The company announce that the contest is now on, and will close the first of January, 1912. The prizes, it will be remembered, are: first, a 3-horsepower Ferro, complete with reverse gear, propeller and ignition equipment; second, a Bosch high tension magneto, and third, a Ferro reverse gear. Every reader who is a camera enthusiast should take advantage of this opportunity. Some very nice pictures have already been received by the Ferro Company. Further particulars regarding the contest may be had by addressing, Photo Contest Editor, The Ferro Machine & Foundry Co., Cleveland, Ohio.

Another New Doman Engine.

The H. C. Doman Company, Oshkosh, Wis., announce an addition to their products in a four-cycle, six-cylinder, sixty-horsepower marine engine of most approved design. The engine is of the heavy-duty type, built for long, hard runs, under great speed. Cylinders are of the "T" type, having 7-inch bore and 9-inch stroke. The engine attains its full rated horsepower at 350 r.p.m. This Doman "60" is designed for the use of fast yachts and cruisers, and for fishermen who make long trips and heavy hauls. It is simply constructed, perfectly balanced, and, the makers inform us, bears out the reputation enjoyed by all other power plants, to be always "there" when the critical strain comes. It is strictly a motor of the upper class.

Winners that Have Sterling Power Plants.

It would seem that a Sterling power plant insures victory for racing motor boats, judging from a glimpse at some of this season's winners. Mit II, winner of the Gold Challenge Cup on the St. Lawrence, is powered with 130 h.p. Sterling; Distruber II, winner both at Peoria and Dubuque, is equipped with two 130 h.p. Sterlings. T & S, equipped with a 100 h.p. Sterling, won the long distance endurance speed contest at Palm Beach. Other well known racers are equipped with Sterlings.

Welmington to Wildwood

(*Continued from page 15.*)

the teeth of a lively blow as they turned around the rips off Cape May and on their way up the coast.

At Anglesea crowds lined the pier early in the morning and glasses were leveled seaward watching for the first boat to appear beyond the bars, where the combers were piling mountain high in appearance, and where the stake boat could be seen pitching about.

Chelwood was the first boat to pass the stake boat, but the sea was running so high that she was unnoticed by the watchers from the shore, and taking advice not to attempt to cross the bar, she turned and sought shelter in the basin by way of Cold Spring Inlet at the lower end of the Island. Others that followed her did likewise until Aljoe passed, which braved the sea and made her way to the pier at Anglesea, where she was greeted with an ovation and for a time was believed to have been the winner of the race.

Idaho, the large cruiser in the first class, owned by Peter Shields, of Cape May, followed soon after and in doing so shipped a heavy sea which almost waterlogged her. The surprise of the day among the speed boats was the work of Elmaja II. Her work showed her seaworthiness, and proves her peculiar build and lines of special merit as a rough-weather boat. Starting late she got the full benefit of the baby nor'easter, which while brief, was a furious one, sufficiently so to keep the fishing men from risking their craft out on the fishing banks that day.

In Design, Equipment, Price
This Engine Meets Your Ideas Exactly

This is the acknowledged testimony of thousands of the "men who know"—the experienced motor-boat men who have tried out the engine problem thoroughly.

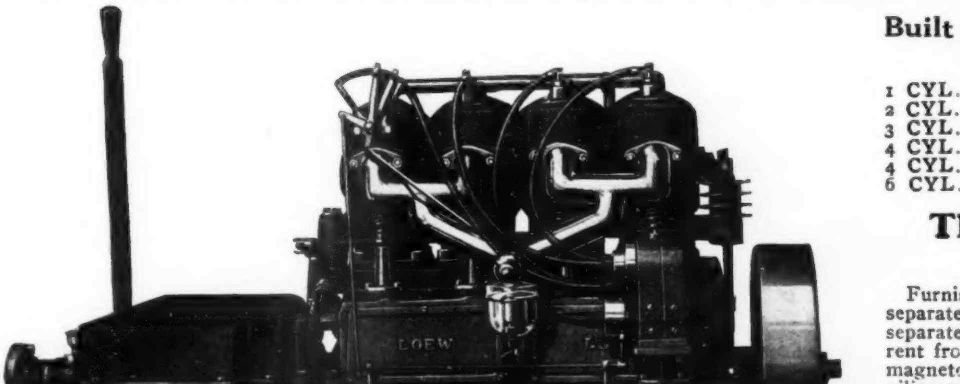
Whether for speed or for cruising, the Loew-Victor engine does its work with unmatched smoothness, ease and freedom from trouble. And a novice can run it.

Loew-Victor Engine

Many boat-makers install Loew-Victor engines as a matter of course, because they know there'll be no come-back.

And before you buy either boat or engine you ought to investigate the Loew. Our profusely illustrated, fully descriptive catalogue is sent free on request. You'll find just the type you want in it.

The Loew Manufacturing Company. 1907 Madison Ave.. Cleveland. Ohio



4 Cyl. 24-40 H. P. 4¾ x 5½.

Built in Different Sizes to Suit Your Requirements

1 CYL.		6 H. P.
2 CYL.		12 H. P.
3 CYL.		18 H. P.
4 CYL.	(Special)	20-30 H. P.
4 CYL.	(Special)	24-40 H. P.
6 CYL.		36-60 H. P.

This Four-Cylinder Loew-Victor

Furnished complete as illustrated—two separate systems of ignition, operating on two separate sets of spark-plugs and deriving current from two separate sources. Battery and magneto, reverse gear, carburetor, automatic oiling system and air compressor are included. Made in either iron or aluminum.

MORE EVIDENCE

Of Unfailing Service Given By

ROBERTS MOTORS

The Motors That Never Backfire

PIRATE II WINNING THE PEORIA-HENRY RACE

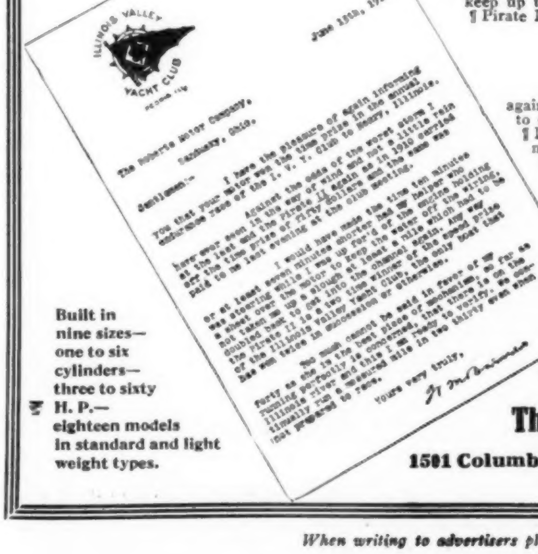
¶ Pirate II, owned by Mr. W. M. Barnes, of Peoria, Ill., has been prominent in Peoria waters for the last four seasons. His Roberts equipped outfit is no freak or speed marvel, but enjoys an enviable reputation for positive and reliable performance.

¶ Many a warm race has been run between Pirate II and boats with many times her power. The steady stream of uninterrupted power impulses delivered by her ROBERTS MOTOR brought her over the line with first money—not because she was the speediest proposition—but because her motor had that invaluable ability to keep up the gait without a quiver.

¶ Pirate II captured first place in 1910 in the annual endurance run of the Ivy Club to Henry, Ill. She

WON AT PEORIA

again this year against odds of weather and speedier crafts. One by one the other contestants were forced to drop into Pirate's wake.



ILLINOIS VALLEY YACHT CLUB PEORIA, ILL.

June 19th, 1911.

The Roberts Motor Company,
Sandusky, Ohio.

Gentlemen:— I have the pleasure of again informing you that your motor won the time prize in the annual endurance race of the I. V. Y. Club to Henry, Illinois.

Against the odds of the worst storm I have ever seen in the way of wind and not a little rain at the last and the Pirate II again as in 1910 carried off the time prize of fifty dollars and the same was paid to me last evening at the club meeting.

I would have made the time ten minutes or at least seven minutes shorter had my helper who was steering while I was up for'd of the engine holding a sheet over the motor to keep the water off the wiring, not taken me up a slough at least a mile which had to be doubled back to get into the channel again. Any way the Pirate II is a two time winner of the speed prize of the Illinois Valley Yacht Club, the only boat that has won twice in succession or otherwise.

Too much cannot be said in favor of my forty as she is the best piece of mechanism, so far as running perfectly is concerned, that there is on the Illinois river and this I am ready to verify. We unofficially run a measured mile in two thirty even when not prepared to race.

Yours very truly,

Built in nine sizes—one to six cylinders—three to sixty H. P.—eighteen models in standard and light weight types.

¶ It might interest our readers to know that the motor in Pirate II was built in 1908. Four seasons of steady racing service certainly prove the real worth of ROBERTS quality. That real genuine quality which means high grade materials and high grade workmanship back of which stands a scientific and carefully tested design.

¶ We have a motor suited to every form of marine service. A ROBERTS will power your fishing dingy—your cruiser—your work boat—your pleasure launch—your speed boat—and will power them all with perfect satisfaction.

¶ Our catalog will be of interest to you—will be sent upon request and our services are at your command.

MODEL 6 P, AEROLITE, 60 H. P., 365 LBS.

The Roberts Motor Company

1501 Columbus Ave., SANDUSKY, OHIO

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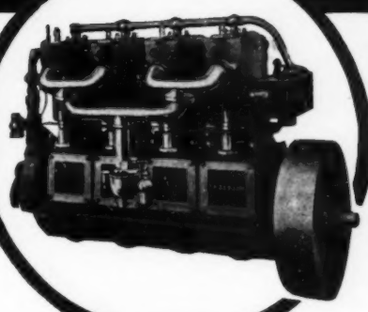

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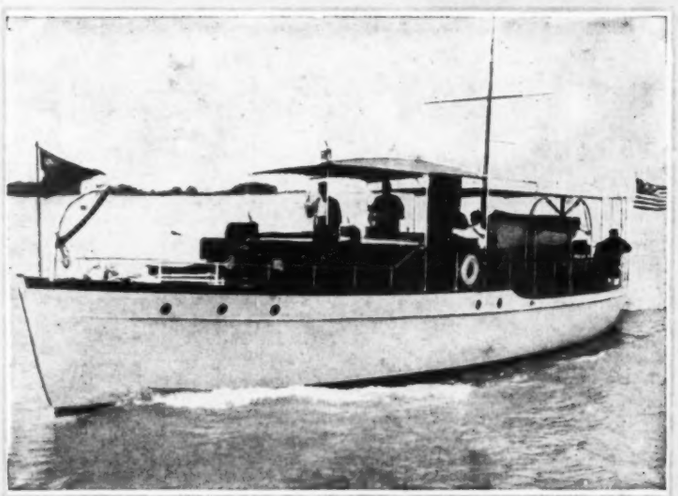
The continued Performance of the Anderson Marine Engine completely justifies the confidence of all owners. They *know* that there is a certainty in Anderson Engines not common to Marine Engines.

This certainty of Performance makes the Anderson worth more—yet they sell for less whether a 2-½ H. P. single cylinder or 150 six cylinder.

Our literature tells the whole story and will interest you. The "saving" in cost justifies you in writing for this story. Do it—now.

ANDERSON ENGINE CO., -:- Shelbyville, Ills., U. S. A.

MATTHEWS CRAFT



MATTHEWS CRAFT

Every Order Must Make Good **Ask Any Owner**

THE cruiser in the accompanying illustration is the second built by us for M. B. Grover, of Cleveland, Ohio, the first being a 51 x 11 ft. mahogany finished cruiser. The following letter has just been received:

THE MATTHEWS BOAT COMPANY,
PORT CLINTON, OHIO.

Gentlemen:

My captain will arrive with the Leonor II at your basin to-day, where I shall leave the boat for a few days.

It is most opportune at this time, having just completed a trip through the Northern Lakes, to tell you how well satisfied I am with the yacht.

The Leonor I which you built for me, gave much pleasure and brought out the features of high-class workmanship and finish, with thoroughly sound construction.

In placing my second contract with you for the 66 ft. cruiser, I find that you have taken advantage of every improvement possible and have left nothing for me to desire further in the way of first-class workmanship and design.

Some very flattering comments have been made concerning your work by men who really know a boat when they see one.

The pleasant business relations during the construction of the boat, have been very gratifying to me and have only gone to increase my confidence in the work of your firm.

Yours respectfully,

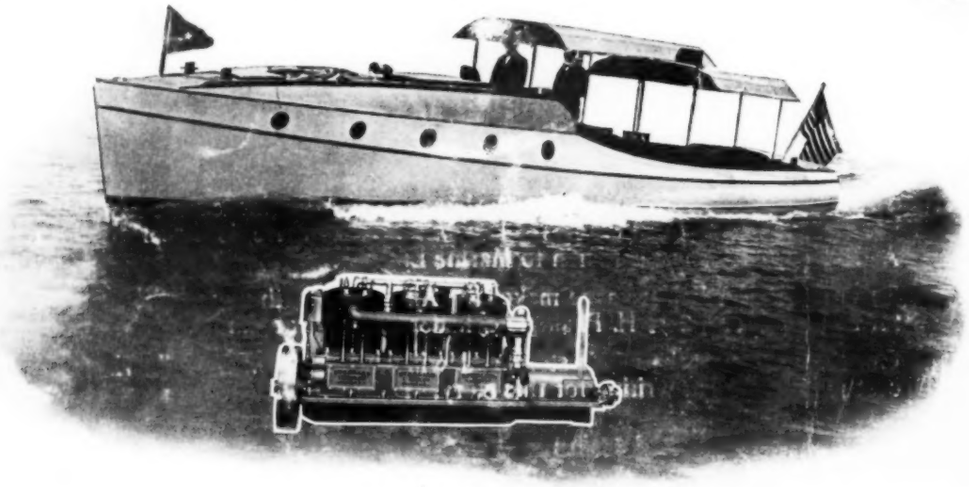
(Signed) M. B. GROVER.

THE MATTHEWS BOAT COMPANY, BUILDERS OF HIGH GRADE MOTOR BOATS AND YACHTS **PORT CLINTON, OHIO**

STERLING

THE ENGINE OF REFINEMENT

FOR THE FINEST BOATS THAT FLOAT



NEW YORK YACHT CLUB
STATION NO. 6

Newport, R.I., July 7th, 1911.

Sterling Engine Co.
Buffalo, N.Y

Gentlemen:-

There is a great satisfaction in having a good engine in any boat, and I wish to say right here that I have enjoyed satisfaction with my fast cruiser "Barota" since I launched her in Camden, May 6th. She had been in the water scarcely a week when I decided to make a run to Cape Charles, Virginia.

Of course, the Sterling big six was brand new and we gave her lots of oil. We were out eight days and covered over 900 nautical miles without so much as changing a spark plug, or touching a wrench to any part of the engine.

The "Barota" runs along at fifteen miles an hour and at the U.S. Govt. measured mile at Deepwater point I put her over the mile in exactly three minutes and fifty seconds against the tide which is 15.65 miles an hour. She is 45' long x 8' beam.

The "Barota" will go to Palm Beach, Florida, in the early Fall under her own power and I will use her there all winter in conjunction with "Suelo" my speed launch which has an 18-25 HP. Sterling installed and which gave eminent satisfaction all last winter.

Yours truly,

James K. Clarke
N.Y.Y.C.

STERLING EXCLUSIVE FEATURES

MECHANICAL OILING SYSTEM, WATER JACKETED EXHAUST MANIFOLD, EXPANSION JOINTS IN ALL WATER CONNECTIONS, ADJUSTABLE PUSH RODS AND MECHANICALLY OPERATED VALVES ON OPPOSITE SIDES, ONE PIECE LOWER BASE CONTAINING CLUTCH AND REVERSE GEAR ASSURING PERFECT ALIGNMENT, OIL GROOVE AROUND BASE TO INTERCEPT DRIPPINGS AND PREVENT SAME FROM SPREADING TO ENGINE ROOM FLOOR, THUS ASSURING CLEANLINESS AND A BILGE FREE FROM OIL AND GREASE, SINGLE BOLT CONSTRUCTION AND MANY OTHERS

MANY OF THE EXCLUSIVE FEATURES ARE COVERED BY OUR PATENTS. THESE AND THE METHODS OF CONSTRUCTION, INSPECTION AND TESTING USED BY THIS COMPANY MAKE STERLING ENGINES THE BEST POWER OBTAINABLE FOR ANY TYPE OF BOAT

DISTURBER II WINS 40-FOOT CHAMPIONSHIP 20-MILE RACE, AND BREAKS ALL RECORDS AT DUBUQUE. SHE IS EQUIPPED WITH TWO 130 H. P. STERLINGS.

8 H. P. TO 240 H. P.

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